

## APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from non-residents of North America until the expiration of ninety (90) days from February 1, 1927.

### MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	30 years	10 years*	5 years
Associate Member	Qualified to direct work	25 years	6 years*	1 year
Junior	Qualified for sub-professional work	18 years†	2 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers			
Fellow	Contributor to the permanent funds of the Society			

\* Graduation from a school of engineering of recognized reputation is equivalent to 2 years' active practice.

† Membership ceases at age of 32 unless transferred to higher grade.

# LIST OF APPLICANTS.

Names and Addresses of Applicants for Admission and for Transfer on this Preliminary List.  
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The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The number in the center above each record indicates the serial number of the applicant for the current year, and that at the left the district in which he resides.

The abbreviations in *Italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of two years for graduation and of one-third of a year for each academic year successfully completed in an engineering college without graduation is included in Total Time and Sub-Professional Work.

### FOR ADMISSION

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(1) **AIYENGAR, SREINIVASA VENKITA VARADA**, Public Works Dept., Kottarakara, Travancore, South India. (Age 37. Born Travancore, South India.) March 1911 to date with Public Works Dept., South India, engaged as follows: March 1911 to March 1914 in charge of construction of roads, buildings, bridges, irrigation works, investigations, designs, estimates, etc., Kottarakara Sec.; March to Sept. 1914 in charge on Pathanamthittai Sec.; Sept. to Nov. 1914 on construction of buildings, canal regulation, etc., Karumady; Nov. 1914 to May 1915 on construction of flag staffs, investigations of sea encroachments, groynes, etc., Quilon; May 1915 to Dec. 1916 on Kanjirapally Sec.; Dec. 1916 to Oct. 1917 channel improvements, Thuckalay Section; Oct. 1917 to Dec. 1918 special investigations of Thovala Channel, improving channels, etc., Buthapandy; Dec. 1918 to July 1919 in charge on Pachlpara Works and Buthapandy Sec.; charting boundary and contouring watershed of reservoir, etc.; July 1919 to Jan. 1920 in charge Alwaye Sec.; Jan. 1920 to Feb. 1921 in charge Ponkunvan Sec.; Feb. to Dec. 1921 in charge on reinforced concrete arch bridge (3 spans, 120 ft. each), etc., Mavalikara and Chengannor Secs.; Dec. 1921 to Oct. 1922 in charge Kayam Kulam Sec.; Oct. 1922 to Jan. 1923 on irrigation investigations, etc., Kodayar Project; Jan. to July 1923 river improvements, etc., Kallada; July 1923 to March 1924 designs, estimates and construction of roads, bridges, etc.; March to May 1924 in charge, Kayam Kulam Sec.; May to Sept. 1924 investigation of waters, roads, etc., Karunagapally; Sept. to Oct. 1924 in charge Kotharukara Sec.; Oct. 1924 to Jan. 1925 in charge Haripad Sec.; Jan. to July 1925 investigation, plans, designs, estimates, etc. of roads, bridges, etc.; since July 1924 in charge Kottarakara Sec. *TT* 16: *P* 16: *RC* 16. (Applies in accordance with Sec. 1, Art. I, of the By-laws).

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(1) **ALEXANDROFF, JOHN GABRIEL**, 27 Pokrovka Dneprostroy, Moscow, U. S. S. R. (Age 51. Born Moscow, U. S. S. R.) 1901 C. E., Inst. of Civ. Engrs. 1901 to 1904 with Orenburg-Tashkent Ry., 2 years as Engr. of Tech. Div., on construction, design of iron and stone constructions, and 1 year Sec. Supt. *TT* 3: *P* 3: *RC* 2: *D* 1. 1904 to 1906 on bridge designs under direction of Prof. E. Paton, Moscow. *TT* 2: *P* 2: *D* 2. 1906 to 1907 Supt. of Public Works, Tamboff Dist., construction of small bridges and dams (about 100). *TT* 2: *P* 2: *RC* 2. 1907 to 1909 Cons. Engr., Technical Bureau of G. B. Krassin, Petrograd, Russia, in charge of design of bridges. *TT* 2: *P* 2: *RC* 2. 1909 to 1912 Cons. Engr., Petrograd Metallic Plant, in charge of construction of Finland Bridge across Neva River; 1909 Lecturer and 1911 Prof., Petersburg Polytechnical Coll. for Women; 1910 Lecturer, Petersburg Technological Inst. *TT* 3: *P* 3: *RC* 3. 1912 to 1913 in charge of designing reinforced concrete bridges across canals in Golodnaya Step in Turkestan for Reclamation Dept. *TT* 1: *P* 1: *D* 1. 1913 to 1918 in charge of investigations for construction of water reservoirs in upper section of Syr-Darya River, Turkestan. *TT* 5: *P* 5: *RC* 5. 1918 to 1920 with Committee of State Constructions, Dept. of Public Works, as Chf. of Dept. for Hydrotechnical Projects and Investigations, elected Pres., Water Bureau of Financial-Economical Council (1919) and on design of development of Dneper Rapids for same Council; 1919 also Prof., and Pres., Organization

Bureau, Turkestan Univ.; 1920 Prof., Mejevoy Inst., Moscow; also on design of electrification project of South West of Russia for State Electrification Comm. *TT 2: P 2: RC 2.* 1921 to date Chf. Engr., Dneper River Development, and Member, Board of State Planning Comm., Gosplan. *TT 6: P 6: RC 6.* *TT 26: P 26: RC 19: D 5.* Refers to H. L. Cooper, J. W. Rickey, J. E. S. Thorpe, W. M. White. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(1) **ANDERSON, DAVID**, 9 Iddelesleigh House, Caxton St., Westminster, London, S. W. 1, England. (Age 46. Born Leven, Fife, Scotland.) 1900 B. S., St. Andrew's Univ. *TT 2: SP 2.* Aug. 1900 to Aug. 1905 Apprentice and Draftsman, Sir Wm. Arrol & Co., Ltd., Bridge Bldrs., Glasgow, Scotland. *TT 5: SP 5.* Aug. 1905 to Jan. 1907 and Oct. 1909 to March 1911 Eng. Asst. on design of steel bridges, etc., and March 1911 to July 1913 Res. Engr., Rochester (Kent) Bridge reconstruction, with Sir Benjamin Baker & A. C. Hartzig. *TT 5.2: P 5.2: RC 2.3: D 2.9.* Jan. 1907 to Oct. 1909 Res. Engr. with Benjamin Baker and Basil Mott, on Blackfriars Bridge widening. *TT 2.7: P 2.7: RC 2.7.* July 1913 to March 1917 and March 1919 to Dec. 1922 Chf. Asst. Engr. with Mott & Hay, London, on design and supervision of construction of bridges and (after March 1919), underground railways and designs of hydro-electric schemes, etc. *TT 7.4: P 7.4: RC 7.4: D 7.4.* March 1917 to March 1919 Capt., Royal Marine Engrs., Admiralty, London, technical work on Trans-Channel train ferries and anti-submarine works. *TT 2: P 2: D 1.* Dec. 1922 to date member of firm, Mott, Hay & Anderson, on design and supervision of bridges, underground railways, escalators, etc., London, vehicular tunnel, Liverpool, including Newcastle-Gateshead Bridge (£1 000 000), Wearmouth (£250 000) Newport (£150 000), Trent and Bootheferry (each £100 000) and Queensferry (£80 000) Bridges, etc. *TT 3.9: P 3.9: RC 3.9: D 3.9.* *TT 28.3: SP 7: P 21.3: RC 16.4: D 15.2.* Refers to R. Freeman, H. J. F. Gourley, B. H. M. Hewett, W. L. Lowe-Brown, J. M. Moncrieff, F. Palmer.

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(15) **ARELLANO, CARLOS V.** Capuchinas 25, Mexico, D. F., Mex. (Age 22. Born Aguascalientes, Mex.) 1925 S. B. and 1926 S. B. and S. M., Mass. Inst. Tech. *TT 2: SP 2.* June 1926 to date surveying and designing small construction. *TT 0.5: P 0.5: D 0.1.* *TT 2.5: SP 2: P 0.5: D 0.1.* Refers to J. B. Babcock, 3d., G. L. Hosmer, C. M. Spofford, C. H. Sutherland, R. G. Tyler.

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(5) **AUSBAND, GEORGE ALSENO, Jr.**, Box 863, Danville, Va. (Age 24. Born High Point, N. C.) 1925 B. S. in Civ. Eng., Univ. of N. C. *TT 2: SP 2.* June to Sept. 1923 Recorder with T. Saville, on North Carolina Geological Survey, kept field notes, computations and at times in charge of party. Sept. 1924 to 1925 co-operative work (while student), checking design, and operation and tests of water-filtration plants with North Carolina State Board of Health. 1925 to Jan. 1926 Rodman, Southern Ry. Co. *TT 0.6: SP 0.6.* Jan. to May 1926 Chf. of Party, Comision Nacional de Caminos, Mexico City, on bridge and drainage structure location. *TT 0.3: P 0.3.* July 1926 to date with S. Ry. Co., until Sept. 1926 as Transmittan in charge of surveys, drafting and general estimating, and since then Jun. Engr. on surveys, engineering investigations and estimating. *TT 0.5: P 0.5.* *TT 3.4: SP 2.6: P 0.8.* Refers to G. M. Braune, T. F. Hickerson, H. E. Miller, T. Saville, P. K. Schuyler, T. Spelden.

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(1) **BAHAH, EMIL JOSEPH**, 195 Atlantic Ave., Brooklyn, N. Y. (Age 23. Born Cairo, Egypt.) 1926 C. E., Pol. Inst. of Brooklyn. *TT 2: SP 2.* Sept. to Oct. 1926 Asst. Field Engr., Raymond Concrete Pile Co., New York City, on layout and leveling. *TT 0.2: P 0.2.* Oct. to Dec. 1926 Leveler, Chainman and Asst. in Office, Miller & McGiffert, Montclair, N. J. *TT 0.2: P 0.2.* Dec. 1926 Leveler, Chainman and Asst. in Office, Sleepy Hollow Manor Corp., New York City. *TT 0.1: P 0.1.* *TT 2.5: SP 2: P 0.5.* Refers to C. W. Hudson, E. J. Squire.

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(10) **BAILEY, ROBERT WILLIAM, Jr.**, Box 79, Ninety Six, S. C. (Age 28. Born Sampit, S. C.) 1921 B. S., Clemson Agri. and Mech. Coll. *TT 2: SP 2.* June 1921 to Aug. 1922 Instrumentman, and Aug. 1922 to April 1926 Res. Engr. with Tucker & Laxton, on pump station, water-supply line, sewers and filter plants, dam and power house, etc. *TT 4.3: SP 1.8: P 3: RC 0.9.* April 1926 to date Res. Engr., J. E. Sirrine & Co., cotton mill construction. *TT 0.8: P 0.8: RC 0.8.* *TT 7.6: SP 3.8: P 3.8: RC 1.7.* Refers to G. H. Bishop, H. L. Hagerman, G. L. Moulton, E. L. Scruggs, C. W. Smedberg, O. Z. Wrenn.

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(1) **BARTON, CHARLES PIERCE, Jr.**, Hewlett, N. Y. (Age 37. Born Louisville, Ky.) 1915 M. E., Univ. of Mich. *TT 2: SP 2.* July 1915 to March 1916 Mechanic, Ford Motor Car Co., studying system and production methods. *TT 0.7: SP 0.7.* March 1916 to Feb. 1917

Progress Engr., Fore River Ship Building Corporation, Quincy, Mass., record progress of steel in fabrication and erection; Asst. Maintenance Engr. TT 0.9: SP 0.5: P 0.4. Feb. to May 1917 Asst. Master Mechanic, Maxwell Motor Car Co., Detroit, Mich., at Dayton (Ohio) Plant, on design of gear testing machine. TT 0.2: P 0.2: D 0.2. May 1917 to March 1919 with U. S. Army, until Aug. 1917 at 1st Officers' Training Camp; then commissioned 1st Lieut., and Dec. 1918 commissioned Capt., Ordnance Dept.; on experimental machine guns at Springfield (Mass.) Arsenal. TT 1.8: P 1.8: RC 1: D 0.2. March 1919 to March 1921 Engr., Tiffin Products, Inc., designing new plant layout and alterations of old Steward Speedometer Bldg., Long Island City. TT 2: P 2: RC 1.6: D 0.4. March 1921 to Aug. 1923 Engr., Thompson Starrett Co., in Mech. Dept., mechanical investigations on heating plant, later in charge of New Business Dept. TT 1.5: P 1.5: RC 1.5. Aug. 1923 to Oct. 1925 Engr. and planning bank designs, new buildings, Alfred C. Bossom, Archt., New York City, construction and contracting. TT 2: P 2: RC 1: D 1. Oct. 1925 to Dec. 1926 Engr. and Vice-Pres., Weber Eng. Corporation, estimated, engineering design and general supervisions, concrete, gunite and grouting work, sewers, bridges and piers. Dec. 1926 to date Engr. in charge of sales, Underpinning & Foundation Co., New York City. TT 1.2: P 1.2: RC 0.7: D 0.2. TT 12.3: SP 3.2: P 9.1: RC 5.8: D 2.1. Refers to J. R. Breuchaud, M. E. Cooley, W. A. Starrett, K. B. Weber, J. R. Wemlinger.

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(1) BECKER, SAMUEL LEVY, 1063 Walton Ave., Bronx, New York City. (Age 26. Born Kovel, Poland.) 1921 B. S., Cooper Union (day school). TT 2: SP 2. Nov. 1921-Dec. 1922 Eng. Asst., Bronx Parkway Comm., assisting in Design Dept. on bridge work. TT 1.1: SP 1.1. Feb. 1923 to date Asst. Engr., Bureau of Bldgs., Borough of Manhattan, in charge of engineering in Public Safety Div., including examining plans for new buildings and for alterations and past 1½ years in charge of examining all engineering work on plans. TT 3.9: P 3.9: RC 1.5. TT 7: SP 3.1: P 3.9: RC 1.5. Refers to R. M. Burkhalter, H. Cash, M. L. Kaufman, L. M. Levine, J. O. Lewis, H. I. Oser.

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(14) BERGHORN, HENRY GERHARD, 700 Interstate Bldg., Kansas City, Mo. (Age 25. Born Boles, Mo.) 1925 B. S. in C. E., Univ. of Mo. TT 2: SP 2. May to July 1923 Chainman, Frisco Lines, acting as Rodman, drafting, etc. June 1925 to date Jun. Engr., Clark E. Jacoby Eng. Co., drafting, etc., acting as Topographer, Instrumentman and Levelman. TT 1.6: SP 1.6. TT 3.6: SP 3.6. Refers to W. T. Brooks, J. L. Burkholder, A. L. Hyde, C. E. Jacoby, H. K. Rubey, E. L. Williams, E. N. Wood.

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(1) BRESSLER, HENRY WILLIAM, 112 Riverside Drive, New York City. (Age 25. Born Pottsville, Pa.) 1924 B. Sc. in C. E., Bucknell Univ. TT 2: SP 2. June 1924 to Sept. 1925 Inspector, Transitman and Chf. of Party, Pennsylvania Dept. of Highways, inspection and surveys. TT 1.3: SP 1.3. Sept. to Nov. 1925 and April to May 1926 Foreman, Pottsville (Pa.) Constr. Co., on earth-fill dams and concrete structures. TT 0.3: SP 0.3. Nov. 1925 to April 1926 Transitman, with Wm. A. Smith, Civ. Engr., Tuckahoe, N. Y., on surveys, etc. TT 0.3: SP 0.3. May to Dec. 1926 Foreman, successively with Petro Luciano, A. Riegel & Sons and David Graham, all of White Plains, N. Y., and Marshall Constr. Co., New York City, on sewer, paving and small concrete dam construction and grading on highway work. Dec. 1926 to date Engr., R. Waddington & Sons, Inc., Contrs., Hoboken, N. J., on excavation and pile-driving. TT 0.7: SP 0.7. TT 4.5: SP 4.5. Refers to W. Frick, W. A. Smith, J. J. White.

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(10) BROGDEN, VERNON SINGERLAND, 920 Arthington Ave., Nashville, Tenn. (Age 28. Born Sparta, Tenn.) 1918 to 1921 student, Cumberland Univ., Lebanon, Tenn., and (1 year) Univ. of Tennessee. TT 0.3: SP 0.3. June to Sept. 1920 Draftsman, State Road Dept. of Kentucky. TT 0.2: SP 0.2. June to Oct. 1921 Transitman, U. S. Army Engrs., on lock and dam construction, estimating excavation, testing materials, etc. TT 0.3: P 0.3. Oct. 1921 to Jan. 1922 Transitman and Inspector on asphalt and concrete paving, J. B. McCalla & Co., Civ. and Mun. Engrs., Knoxville, Tenn. TT 0.3: P 0.3. April 1922 to April 1923 Chainman, Instrumentman and assisting on calculations, Mallory (W. Va.) Coal Co. TT 1: P 1. April to Oct. 1923 Engr. in charge of three coal mines, W. E. Deegans Con. Coal Co. of Huntington, W. Va. TT 0.5: P 0.5: RC 0.5. Oct. 1923 to Jan. 1924 Transitman on subdivision work, with R. W. Breece, Engr., Huntington. TT 0.3: P 0.3. Jan. 1924 to Sept. 1925 Transitman, Draftsman and Res. Engr., on paving, with B. H. Klyce, Engr., Nashville. TT 1.7: P 1.7: RC 0.3. Sept. 1925 to July 1926 Transitman and Project Engr. on highway location, Florida State Road Dept. TT 0.8: P 0.8: RC 0.5. July 1926 to date Transitman, Draftsman and

Res. Engr. on paving projects (\$600 000), with Klyce & Harrub, Engrs., Nashville. *TT 0.6: P 0.6: RC 0.3. TT 6: SP 0.5: P 5.5: RC 1.6.* Refers to N. W. Dougherty, M. Hansford, C. N. Harrub, B. H. Klyce, C. W. Lovell, W. L. Picton, W. E. Wilbur.

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(1) **BROWN, ABRAHAM**, 1338 Stebbins Ave., New York City. (Age 23. Born Odessa, Russia.) 1924 B. S., Mass. Inst. Tech. *TT 2: SP 2.* July 1924 to Aug. 1925 member of firm, Goodman & Brown, Surveyors. *TT 1.1: P 1.1: RC 1.1.* Aug. 1925 to Feb. 1926 Jun. Engr., Dept. of Valuation, Interstate Commerce Comm. *TT 0.5: SP 0.5.* Feb. to Nov. 1926 Engr., Sanders Eng. Co., Portland, Me., in charge of construction for contractor and responsible for surveying, laying out of work, supervision, etc. *TT 0.8: P 0.8: RC 0.8. TT 4.5: SP 2.6: P 1.9: RC 1.9.* Refers to H. L. Bowman, C. B. Breed, J. W. Howard, C. M. Spofford, C. H. Sutherland.

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(1) **BROWN, DALTON MUNROE**, 25 West Ninety-third St., New York City. (Age 27. Born Nashua, N. H.) 1925 C. E., Thayer School of Civ. Eng. *TT 2: SP 2.* May to Sept. 1924 Field Inspector, Illinois State Highway Dept., Yorkville, Ill., in charge of grading and inspecting sand and gravel. May 1925 to date with Kenn-Well Contr. Co., Gen. Contr. for New York Edison Power Plant at 14th St. and East River, about 5 months as Inspector of concrete, plumbing and brick work, then Asst. Constr. Engr. on reinforced concrete work, proportions, collection of data, field problems, etc. *TT 1.7: SP 0.4: P 1.3. TT 3.7: SP 2.4: P 1.3.* Refers to J. L. Bogart, F. E. Cudworth, H. M. Hale, C. A. Holden, R. R. Marsden, A. P. Richmond.

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(15) **CAREY, FRANK CULPIN**, 4th Mississippi River Dist., River Front at Burdette St., New Orleans, La. (Age 32. Born Yonkers, N. Y.) Graduate in Civ. Eng., International Correspondence School. Feb. 1912 to Oct. 1914 Chainman and Rodman, Canadian Northern Ry. *TT 2.8: SP 2.8.* Feb. to July 1915 Jun. Asst. Engr., Public Service Comm., New York State, instrument work on subway construction. *TT 0.5: SP 0.5.* Aug. 1915 to Dec. 1919 (except Sept.-Oct. 1918, Student, Engr. Officers Training School, U. S. Army) Jun. Civ. Engr., Interstate Commerce Comm., Eastern Dist., railway valuation work, 2 years acting as Chainman, Rodman, Instrumentman, then in charge of field work. *TT 4.3: SP 2: P 2.3.* Jan. to April 1920 Appraisal Engr., Cooley & Marvin Co., valuation surveys of industrial plants, in responsible charge. *TT 0.3: P 0.3: RC 0.3.* May to July 1920 Appraiser, National Appraisal Co., Boston, Mass., on industrial plants. *TT 0.3: P 0.3.* Aug. 1920 to date Jun. Engr., Asst. Engr., U. S. Engrs., Mississippi River Comm., five years in charge of field units on revetment work, then on flood control study, river hydraulics and design. *TT 6.4: P 6.4: RC 6.4: D 1. TT 14.7: SP 5.4: P 9.3: RC 6.7: D 1.* Refers to E. B. Geddes, W. E. Knobloch, E. W. Lane, D. S. Roberts, B. A. Ross, G. C. Schoenberger.

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(11) **CARTER, JOHN LARK**, 4746 West Point Loma Boulevard, Ocean Beach, Cal. (Age 45. Born Great Yarmouth, England.) 1903 to 1907 with City of Calgary, Alberta, Canada, first in charge of water construction, then Asst. to City Engr., on sewers, water, paving, street railway, tunnel under river, etc. *TT 4: SP 1: P 3: RC 3: D 1.* 1907 to 1908 Res. Engr., Municipal Eng. & Contr. Co., Calgary, in charge of construction of water and electric lighting systems. *TT 1: P 1: RC 1: D 0.2.* 1908 to 1909 Res. Engr., City of Calgary, in charge of construction of gravity water supply. *TT 1: P 1: RC 1: D 0.2.* 1909 to 1914 with A. P. Patrick, D. T. S., Calgary, in charge of surveys, including location of pipe line (185 miles) for Calgary Natural Gas Co., triangulation work in Rockies, etc. *TT 5: P 5: RC 5.* 1914 to 1917 with Engrs., Canadian Overseas Forces, on construction of front-line military structures, reports. *TT 3: SP 3.* 1917 to 1923 chiefly in military hospitals. 1923 to 1925 Instrumentman, Ed. Fletcher Co., San Diego, Cal. *TT 1.5: P 1.5: RC 0.2: D 0.1.* 1925 to date in private practice of engineering and surveying, La Jolla, Cal., on subdivision work, designing and laying out sewers, water, grading, paving, etc., designing and superintending septic tanks, designing building foundations, etc. *TT 1: P 1: RC 1: D 1. TT 16.5: SP 4: P 12.5: RC 11.2: D 1.7.* Refers to B. E. Boyd, W. M. Butts, L. F. Heuperman, H. W. Jorgensen, T. H. King.

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(11) **CLARKE, WILLIAM DANELS**, 2029 Truxton Ave., Bakersfield, Cal. (Age 38. Born Salem, Mo.) 1909 B. S. in Eng., Mo. School of Mines. *TT 2: SP 2.* 1909 to 1910 with Utah Copper Co., Garfield, Utah, on plant operation. *TT 1: SP 1.* 1910 to 1911 with San Joaquin Light & Power Co., Bakersfield, Cal., on engineering, pole-line location, surveying and construction. *TT 1: P 1.* 1911 to 1915 Asst. Engr., City of Bakersfield, in charge of design and construction of paving and sewers. *TT 4: P 4: RC 2: D 2.* 1916 to 1917 with DuPont Co., high explosives, in responsible charge of plant operation at Gibbstown, N. J., and

Louviers, Colo. TT 2: P 2: RC 2: 1917 to 1919 with Co. D, 314th Engrs., U. S. Army, also 1st Lieut., Ordnance Dept., High Explosives Div., Production Officer, U. S. Ammonium Nitrate Plant, Perryville, Md. TT 2: P 2: RC 2: 1919 to 1921 in responsible charge of plant operation, DuPont Co. Dye Works, Deep Water Point, N. J. TT 2: P 2: RC 2: 1921 to date City Engr. and Supt. of Streets, Bakersfield. TT 5: P 5: RC 5. TT 19: SP 3: P 16: RC 13: D 2. Refers to H. S. Allen, G. L. Henderson, Jr., C. F. Johnson, A. L. Trowbridge, R. W. Whitaker, W. F. Whitaker.

## 127

(8) CORCORAN, LOUIS PAUL, 33 West Grand Ave., Chicago, Ill. (Age 24. Born Wallace, Idaho.) 1926 B. S., Wash. State Coll. TT 2: SP 2. Sept. 1922 to Sept. 1923 Instrumentman, Pacific Telephone & Telegraph Co., Spokane, Wash. TT 1: SP 1. June to Oct. 1925 Asst. City Engr., Pullman, Wash., erection of sewage-disposal plant. Sept. 1926 to date Field Engr., Portland Cement Association. TT 0.3: SP 0.3. TT 3.3: SP 3.3. Refers to B. E. Brevik, H. E. Phelps, L. S. Trainor, O. L. Waller.

## 128

(11) CRIST, MARION LOWELL, 1026 1/4 Laguna Ave., Los Angeles, Cal. (Age 23. Born Wabash, Ind.) 1925 A. B., Stanford Univ. TT 2: SP 2. March 1925 to date Asst. Engr. for Burns-McDonnell-Smith Cons. Eng. Co. TT 1.7: SP 0.4: P 1.3: RC 0.5. TT 3.7: SP 2.4: P 1.3: RC 0.5. Refers to R. E. McDonnell, B. I. Means, L. B. Reynolds, C. A. Smith, C. S. Timanus, C. B. Wing.

## 129

(5) CULLIMORE, WILLIAM HENRY HARRISON 3d, 3114 Frederick Rd., Baltimore, Md. (Age 27. Born Baltimore, Md.) 1919 Diploma of Eng., Baltimore Pol. Inst. 2 years student, C. E. course, Johns Hopkins Univ. TT 0.7: SP 0.7. June to Sept. of years 1917 and 1918 Draftsman, Chesapeake & Potomac Telephone Co., Baltimore, Md., on floor plans, circuits, machine arrangements, etc. Oct. 1920 to March 1923 Draftsman, Paving Comm., Baltimore, plans, profiles, etc., street paving, estimates of materials and grading. TT 2.5: SP 2.5. April 1923 to May 1925 Office Engr. and Asst. to Highway Engr., City of Greensboro, N. C., in charge of design and surveys, street paving and surface drainage. TT 2.2: P 2.2: RC 2.2: D 2.2. June 1925 to date with City of Baltimore, 6 months as Asst. Engr., Bureau of Sewers, in charge of sewer contracts and specifications, being Asst. to Engr. in charge of day labor forces, investigations and correspondence for Sewerage Engr.; since Dec. 1925 Office Engr., Bureau of Highways, in charge of design and surveys, street paving (approx. 40 miles of 30-ft. streets, over \$2 000 000). TT 1.5: P 1.5: RC 1.5: D 1. TT 6.9: SP 3.2: P 3.7: RC 3.7: D 3.2. Refers to R. K. Compton, B. L. Crozier, F. K. Duncan, G. E. Finck, P. C. Painter, S. Purcell.

## 130

(1) DARDEL, WALTER, 115 Stuyvesant Pl., St. George, N. Y. (Age 29. Born Aarberg, Berne, Switzerland.) 1918 C. E., Ecole Tech., Berthoud, Switzerland. TT 2: SP 2. April to Sept. 1916 Jun. Engr. with Schafr & Mueller, Engrs. and Contrs., on surveys, drafting and clerical work, construction of hydro-electric power house at Egilsan, Zehn., Switzerland. Jan. to Sept. 1920 municipal work for City of Aarberg (Berne). TT 0.7: P 0.7: RC 0.7. Oct. 1921 to Feb. 1922 Topographical Draftsman, Technical Advisory Corporation, New York City, city planning and zoning, preparing maps. TT 0.4: P 0.4. April 1922 to April 1923 Field and Office Engr. Barahona (Dominica) Sugar Co., Inc., preparing topographical surveys, maps, canal routes, cross-sections for canals, plans and designs for irrigation gates. TT 1: P 1. May 1923 to March 1924 Eng. Asst., Technical Advisory Corporation, municipal research problems for highway, railroad grade separation plans, estimates, municipal sewers, street traffic plans and (under E. P. Goodrich, Cons. Engr.) investigation for deepening of James River up to Richmond, Va. TT 0.9: P 0.9: D 0.4. March 1924 to June 1926 Bridge Designer, Michigan State Highway Dept., Lansing, Mich., designs of reinforced concrete bridges, standardizing design methods, estimates. TT 2: P 2: D 2. June 1926 to date Structural Designer, Dwight P. Robinson & Co., Inc., New York City, design of foundations, etc., for industrial buildings and railroad terminals. TT 0.5: P 0.5: D 0.5. TT 7.5: SP 2: P 5.5: RC 0.7: D 2.9. Refers to V. Christian, H. Doriss, E. P. Goodrich, C. A. Melick, J. A. B. Tompkins, Jr., M. W. Williams.

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(11) DINSMORE, MATTHEW RAYMOND, 833 East Acacia St., Glendale, Cal. (Age 41. Born Sidney, Ohio.) 1902 to 1905 student, Ohio Northern Univ. TT 1: SP 1. Summers Timekeeper etc. to Gen. Foreman for small contracting firms. 1905 to Nov. 1906 in Eng. Dept., Indiana Union Traction Co. TT 0.4: SP 0.4. Nov. 1906 to Oct. 1907 with Florida East Coast Ry., successively as Rodman and Transitman (about 2 months), Chf. of line and grade party on Long Key Viaduct, and in charge of night shift construction on this viaduct (under Wm. V. Venable). TT 0.9: SP 0.2: P 0.7. Oct. 1907 to Oct. 1908 Ayndante de

Obras Publicas, in charge (under direction of Geo. P. Morrill) of surveys and designs for Water-Works Dept., Province of Santa Clara, Cuba. *TT 1: P 1.* Oct. 1908 to Jan. 1910 with American Eng. & Constr. Co., Mexico, six months as Field Engr., then Asst. Mgr. *TT 1.2: P 1.2.* Jan. to July 1910 Constr. Engr., Mexican National Gas Co., Mexico City, Mexico, in charge of construction of plant. *TT 0.5: P 0.5; RC 0.5.* July 1910 to Aug. 1911 Engr. and Asst. Supt. of Constr., Mexican Asphalt Paving Co., in charge of work amounting to \$500 000, part of time as Asst. *TT 1: P 1; RC 1.* Sept. 1911 to July 1912 Field Engr., and July to Dec. 1912 Asst. Civ. Engr., The Mexican Light & Power Co. and Mexico Tramways Co. *TT 1.3: P 1.3; RC 1.3.* Dec. 1912 to Dec. 1913 Div. Engr., Ebro Irrigation & Power Co., Lerida, Spain (Pearson Eng. Corporation), in charge of construction of canals and dams. *TT 1: P 1; RC 1.* March 1914 to Dec. 1916 Engr.-Inspector and Supt. of Constr., Board of State Engrs. of Louisiana, in charge of work for Caddo Levee Dist., flood control and bank revetment work. *TT 2.7: SP 0.7; P 2; R C2; D 2.* Feb. 1917 to March 1918 Supt. of Constr., Plant No. 2, Goodyear Tire & Rubber Co., Akron, Ohio. *TT 1.1: P 1.1; RC 1.* March 1918 to Jan. 1922 with City of Akron, as Asst. Engr., Bureau of Water Supply, in charge of construction and later Supt., Div. of Street Repairs, in charge of maintenance of all streets. *TT 3.7: P 3.7; RC 3.7; D 2.* Jan. 1922 to Jan. 1923 in private practice and contracting work. *TT 1: P 1; RC 1.* Jan. to Oct. 1923 Supt., Ohio Contr. Co., in charge of paving, Cleveland, Ohio. *TT 0.8: P 0.8; RC 0.8.* Oct. 1923 to Oct. 1924 in private practice at Los Angeles, estimating for contractors, quantity survey work, etc. *TT 1: P 1; RC 1.* Oct. 1924 to date Sales Engr., Concrete Machinery & Supply Co., on layout work in connection with selling contractor's equipment. *TT 2: P 2; RC 2; D 1.* *TT 20.6: SP 2.3; P 18.3; RC 15.3; D 5.* Refers to G. G. Dixon, J. C. Gist, W. J. Kingscott, G. P. Morrill, F. C. Tolles.

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(11) DOOLITTLE, HAROLD LUKENS, 1520 Rose Villa St., Pasadena, Cal. (Age 43. Born Pasadena, Cal.) 1906 M. E., Cornell Univ. *TT 2: SP 2.* 1906 to 1909 Draftsman and Designer with E. S. Cobb, Cons. Engr., Los Angeles, on steel-plant structural and miscellaneous design. *TT 3: SP 1; P 2; D 2.* Dec. 1909 to date with Southern California Edison Co., Los Angeles, first as Draftsman, approx. 15 years Asst. Constr. Engr. having direct supervision of draftsmen and designers, and supervising design of hydraulic and steam plants, structural work, etc.; since July 1926 Chf. Designing Engr., in charge of Dept. of Eng. Design (180 men) on design of hydraulic power plants, 220 000-volt transmission lines, substations, buildings, pipe lines, etc. *TT 17: P 17; RC 16; D 15.* *TT 22: SP 3; P 19; RC 15.5; D 17.* Refers to W. A. Brackenridge, H. W. Dennis, E. C. Hutchinson, R. W. Lawton, W. Putnam, I. C. Steele.

## 133

(6) DUNCAN, CARROLL ALLEN, Pennsboro, W. Va. (Age 37. Born Bloomfield, Ky.) 1914 B. C. E., Univ. of Ky. *TT 2: SP 2.* June 1913 to April 1918 with Delaware, Lackawanna & Western R. R., until Jan. 1914 as Instrumentman, then Inspector on track work, and after Jan. 1915 Asst. Engr. on grade-crossing eliminations, 1 year in charge of party on surveys and 1 year laying out and inspecting work on two bridges. *TT 4.9: SP 1.6; P 3.3; RC 1; D 1.3.* April 1918 to date with Sanderson & Porter, Engrs., until Aug. 1920 as Field Engr., laying out work and explaining drawings on power stations at Fairmont, W. Va., and Springdale, Pa.; then Job Supt., completing the station at Springdale (Aug. 1920 to Feb. 1922), in charge of installation of a power station (Feb. 1922 to March 1923) and building an addition to one (March 1923 to March 1924); after March 1924 Res. Constr. Supt., in charge of construction of additions to power stations and of building a transmission line, and 3 months in main office estimating. *TT 8.7: P 8.7; RC 6.1.* *TT 15.6: SP 3.6; P 12; RC 7.2; D 1.3.* Refers to F. Blossom, W. J. Carrel, W. E. Hamilton, H. H. Porter, G. J. Ray, R. V. Rosenbaum, D. V. Terrell.

## 134

(10) EEFING, THEODORE, 410 Guaranty Bldg., West Palm Beach, Fla. (Age 25. Born Chicago, Ill.) 1925 received Florida State certificate. Jan. to July 1918 Rodman, with Benjamin Eefing, also acting as Instrumentman and Draftsman. *TT 0.5: SP 0.5.* Sept. to Dec. 1919 Rodman, Dec. 1919 to March 1921 Instrumentman and March 1921 to Sept. 1922 Chf. of Field Party, with P. R. Bowers, West Palm Beach, Fla., municipal, subdivision, survey work, etc., also drafting. *TT 3: SP 2.5; P 0.5; RC 0.5; D 0.5.* Nov. 1922 to May 1923 Draftsman with Sargent & Lundy, Chicago, Ill., Turbo Elec. Engrs., tracing, drafting, checking, design, structural steel and reinforced concrete. *TT 0.5: SP 0.5.* May 1923 to date with Carr & McFadden, Inc., West Palm Beach, until July 1924 as Engr. in charge of subdivision and townsite development, including all improvements, part of time as Res. Engr.; since then Vice-Pres. and Office Engr., having personal direction of \$8 000 000 improvement program, mostly on townsite and subdivision development; also executive management of

Eng. Force. *TT 3.7: SP 0.2: P 3.5: RC 3.7: D 3.* *TT 7.7: SP 3.7: P 4: RC 4.2: D 3.5.* Refers to C. A. Bingham, W. Caccia, G. W. Carr, J. Firth, W. Harwood, C. H. Holtslow, G. W. Hutchinson, M. R. Kays, G. McFadden, C. H. Ruggles, R. L. Stevens, O. E. Young.

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(9) **ELBIN, GUY HERBERT**, 722 South Johnson St., Ada, Ohio. (Age 36. Born Clearville, Pa.) 1916 B. S. in C. E., and 1920 C. E., Ohio Northern Univ. *TT 2: SP 2.* May 1916 to Aug. 1917 Asst. on Eng. Corps, Pennsylvania R. R. Co., computation and design, and (6 months) Chf. of field party, on Delaware (Ohio) change of line (8 miles). *TT 1.3: SP 0.6: P 0.7.* Aug. 1917 to Aug. 1919 Draftsman, Carnegie Steel Co., Youngstown, Ohio, in office of Civ. Engr. in charge of Constr. Dept., on design and construction of McDonald Townsite, etc. *TT 2: SP 0.5: P 1.5: D 1.* Sept. 1919 to date Prof. of Civ. Eng., and (1924-1925) Acting Dean, Coll. of Eng., Ohio Northern Univ. *TT 7.2: P 7.2: RC 7.2.* *TT 12.5: SP 3.1: P 9.4: RC 7.2: D 1.* Refers to H. C. Boyden, A. S. Hibbs, G. F. Pfeiffer, N. M. Stineman, A. R. Webb.

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(10) **EYRE, ROY SMALLWOOD**, 144 Cordova St., St. Augustine, Fla. (Age 32. Born Highland, Md.) 1918 B. S. in C. E., Univ. of Md. *TT 2: SP 2.* Summer 1917 Tracer, Virginia Bridge & Iron Co., Roanoke, Va., some detailing. May 1918 to April 1919 student U. S. Naval Aviation Ground School, Massachusetts Inst. of Technology, also flying at Miami and Pensacola (Fla.) Flying School; March 1919 commission Ensign at Pensacola. *TT 0.8: P 0.8.* June 1919 to Sept. 1920 Inspector, with U. S. Engrs., at Filtration Plant, Washington, D. C., in charge of testing, repairing and reading water meters, prepared plans and superintended construction of meter vaults and installation of meters on Federal Services. *TT 1.2: P 1.2.* Sept. 1920 to Feb. 1921 Technical Asst., Navy Yard, Washington, D. C., investigating, building and assembling non-magnetic mines. *TT 0.5: P 0.5: RC 0.5.* April 1921 to May 1924 Asst. Civ. Engr., Bureau of Standards, Washington, D. C., prepared plans and superintended construction of, and had charge of design of apparatus and equipment for, reinforced concrete sound-proof laboratory. *TT 3: P 3: RC 1.8: D 1.2.* May 1924 to Feb. 1925 Bridge Designer, Michigan State Highway Dept., Lansing, Mich., reinforced concrete highway bridges. *TT 0.8: P 0.8: D 0.8.* Feb. 1925 to date Asst. Engr., Florida East Coast Ry. Co., St. Augustine, Fla., design and plans for railroad bridges and buildings, estimating and checking. *TT 1.8: P 1.8: D 1.8.* *TT 10.1: SP 2: P 8.1: RC 2.3: D 3.8.* Refers to J. E. Curtis, J. J. Gantt, L. E. Martin, C. A. Melick, H. N. Rodenbaugh, G. P. Springer.

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(1) **FELDMANN, EDWARD HENRY**, Merritt Ave. and Stevens St., White Plains, N. Y. (Age 24. Born New York City.) 1924 B. S., Gettysburg Coll. 1925 B. S. in C. E. Yale Univ. *TT 2: SP 2.* June to Sept. 1920 Rodman, and July to Sept. 1921 Rodman and Instrumentman for R. B. McKinnon, York, Pa., on surveys. June to Nov. 1925 Rodman, Pennsylvania R. R. *TT 0.4: SP 0.4.* Jan. 1926 to date Asst. Engr. to W. W. Young, Cons. Engr. for Westchester County San. Sewer Comm., acting as Rodman, Instrumentman, Asst. Party Chf. and on office work, including computing, drafting and estimating. *TT 1: SP 1.* *TT 3.4: SP 3.4.* Refers to G. W. Gardner, J. C. Tracy, F. C. Ziegler.

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(13) **FERNEAU, THOMAS EDGAR**, Lathrop, Cal. (Age 26. Born Auburn, Nebr.) 1923 B. Sc. in C. E., Univ. of Nebr. *TT 2: SP 2.* Jan. to Sept. 1919 with C. A. Snider & Co., Auburn, Nebr. on rural water supplies, sewer systems, installation of lighting plants, electrical machinery and power lines. *TT 0.7: SP 0.7.* June to Oct. 1921 Chainman, Dept. of Highways, Nebraska. June to Oct. 1922 Rodman, Chicago, Burlington & Quincy R. R. July 1923 to Feb. 1924 Rodman, California Highway Comm., inspection of reinforced concrete structures and bridges, and field office work. *TT 0.6: SP 0.6.* Feb. 1924 to Dec. 1925 supervision, mixing and laying asphalt pavements for Western Willite Co. in California, Arizona and Nevada, investigations of pavements after being in service, promotion of paving projects. *TT 1.9: P 1.9: RC 1.9.* Dec. 1925 to date with Bridge Dept., California Highway Comm., on construction of steel, reinforced concrete girder and reinforced concrete arch bridges; at present Acting Res. Engr. on 600-ft. structure across San Joaquin River (one Bascule and one fixed steel span and concrete girder approaches on concrete pile bents). *TT 1.1: P 1.1: RC 0.5.* *TT 6.3: SP 3.6: P 3: RC 2.4.* Refers to C. C. Cottrell, V. A. Endersby, C. E. Mickey, A. L. Ogle, J. C. Wilson.

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(15) **FIELD, GEORGE ADDISON**, 2113 Thirteenth St., Lubbock, Tex. (Age 27. Born Calvert, Tex.) 1918 to 1922 student, School of Eng., Agricultural and Mechanical Coll. of Texas (6 months), and Univ. of Texas (3 years). *TT 1: SP 1.* June 1922 to date with Texas Highway Dept. until Sept. 1923 as Inspector; Sept. 1923 to March 1924 Chf. Inspector of highway equipment, in charge; March 1924 to March 1925 Headquarters Supt. of Mainte-

nance, being First Asst. to State Maintenance Engr.; and since March 1925 Div. Engr. in charge of construction and maintenance in eighteen counties (956 miles). TT 4.7: SP 1.7: P 3: RC 1.9: D 1.9. TT 5.7: SP 2.7: P 3: RC 1.9: D 1.9. Refers to J. W. Alger, R. W. Baker, G. Gilchrist, H. C. Porter, G. G. Wickline.

## 140

(11) FISHER, SAMUEL MORTON, 402 East Badillo St., Covina, Cal. (Age 40. Born Chicago, Ill.) 1909 B. S. Univ. of Wis. TT 2: SP 2. July to Dec. 1906 Draftsman, Chicago, Burlington & Quincy R. R. TT 0.5: SP 0.5. Jan. 1907 to Jan 1908 with Mexican International R. R., as Draftsman, and (8 months) Res. Engr. in charge of permanent improvements, including construction of steel and masonry bridges, 3-mile cutoff, large earth dam, machine shops, etc. TT 1: SP 0.3: P 0.7: RC 0.7. May 1909 to Sept. 1910 with Carolina & North Western R. R. in South Dakota, as Draftsman, and (about 1 year) Asst. Engr. in charge of construction. TT 1.4: SP 0.4: P 1: RC 1. 1911 to 1913 with Oro Elec. Corporation, San Francisco, Cal., Galloway & Markwart, Cons. Engrs., first as Instrumentman and about 2 years in charge of field investigations for power project, including power-line surveys, canal locations, hydraulics, estimates and preliminary construction. TT 2.5: SP 0.5: P 2: RC 2. July 1913 to June 1914 Asst Engr., Panama-Pacific International Exposition, San Francisco, Cal., in charge of construction of Manufacturers Bldg. TT 1: P 1: RC 1. 1914 to 1915 Field Engr. with Galloway & Markwart, Cons. Engrs., San Francisco, in charge of field investigation for power project (Yolo Light & Power Co.), including complete locations and surveys of diversion works, canal, power house and power lines. TT 1: P 1: RC 1. Sept. 1916 to May 1919 with United Verde Extension Mining Co., Arizona, about 4 months on railroad location and about 2½ years Res. Engr. and Asst. to Chf. Engr. on railroad, highway and smelter yard construction, townsite design and construction. TT 2.7: SP 0.3: P 2.4: RC 1.8: D 0.6. May 1919 to date with Los Angeles County Flood Control Dist., as Asst. to Field Engr. in charge of construction of Devils Gate, San Dimas and Live Oak Dams, in charge of construction of outlet works for these dams, and made complete designs for last two; made preliminary designs for dams in \$35 000 000 bond issue, including Big Santa Anita Dam (arch 240 ft. high), preliminary and final design of Sawpit Dam (arch 165 ft. high, under construction); designed San Gabriel Dam (to be 500 ft. high), plans, estimates, specifications, hydraulics for dams and other flood-control work; at present Designing Engr. TT 7.5: SP 1: P 6.5: RC 3: D 3.5. TT 19.6: SP 5: P 14.6 RC 10.5: D 4.1. Refers to H. D. Dewell, J. D. Galloway, B. F. Jakobsen, F. C. McMillan, F. A. Noetzli, W. A. Perkins, C. C. Small, A. L. Sonderegger.

## 141

(1) FITTS, LLOYD EATON, Hastings-on-Hudson, N. Y. (Age 26. Born Manchester, N. H.) 1923 B. S., Dartmouth Coll. 1924 C. E., Thayer School of Civ. Eng. TT 2: SP 2. June to Sept. 1922 Evaluator, United Gas Improvement Co., Philadelphia, Pa., on Manchester (N. H.) Gas Co.'s plant; being Compiler and Computer. April to Sept. 1923 Chf. of field party, United Gas Improvement Contr. Co. of Philadelphia, in charge of laying out plant at Manchester. TT 0.4: P 0.4: RC 0.4. May 1924 to April 1925 Inspector, New York Reciprocal Underwriters, surveys, etc. TT 1: P 1. April 1925 to Dec. 1926 Asst. Chf. of field party, Kenn-Well Contr. Co., New York City, on New York Edison East River generating station, about 8 months in responsible charge of party. TT 1.6: P 1.6: RC 0.7. TT 5: SP 2: P 3: RC 1.1. Refers to F. E. Cudworth, P. S. Dow, C. A. Holden, R. R. Marsden, A. P. Richmond, Jr.

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(4) FREEMAN, WILLIAM WILLIAMS KEEN, 33 Benezet St., Chestnut Hill, Philadelphia, Pa. (Age 28. Born Philadelphia, Pa.) 1920 A. B., Yale Univ. 1922 B. S., Mass. Inst. Tech. TT 2: SP 2. July to Aug. 1920 Draftsman, Gas Dept., U. G. I. Contr. Co. Aug. to Sept. 1921 Laborer and Sub-Foreman, Aberthaw Constr. Co., Searsburg, Vt., on development of New England Power Co. July 1922 to June 1925 Draftsman and Surveyor (Cadet Engr.), Elec. and Gen. Constr. Dept., U. G. I. Contr. Co., drafting, elementary structural design, laying out transmission lines, surveying, inspecting transmission towers, designed heating systems, and supervised drawings for one, etc. TT 3: SP 2.5: P 0.5. July 1925 to Aug. 1926 Asst. to Engr. in charge of electric work, Elec. Engr.'s Dept., United Gas Improvement Co., design, specifications, estimates and material for transmission lines and for underground distribution system, supervised drawings for system; also superintended construction of small dam. Also Nov. 1925 to Jan. 1926 and April to July 1926 (spare time) Consultant, Copperweld Steel Co., on sag calculations, computing sags and pulls for Copperweld cables. TT 1.2: P 1.2: RC 1.2. Sept. 1926 to date Jun. Engr., Hydro Div., U. G. I. Contr. Co., on preliminary studies and designs for computations for construction of water power projects. TT 0.4: P 0.4. TT 6.6: SP 4.5: P 2.1: RC 1.2. Refers to L. L. Calvert, F. S. Harvey, P. L. Heslop, J. D. Justin, F. E. Lamphere, J. P. Laws, E. H. McHenry, P. W. Stickney, I. N. Towne.

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(10) **FRY, ELBERT DAVID**, Box 1917, Ft. Lauderdale, Fla. (Age 39. Born Lovettsville, Va.) Registered Civ. Eng. and Land Surveyor, State of South Carolina. Took courses in Civ. Eng., International Correspondence School and Wilson Eng. Corporation, Cambridge, Mass. Jan. 1911-1913 Chainman and Instrumentman, Green Ridge (Md.) Valley Orchard Co. TT 3: SP 3. Jan. 1914 general land surveying in Loudoun County, Va. TT 1: P 1: RC 1. Jan. 1915-June 1917 Instrumentman and Res. Engr. in charge of grading and paving city streets, King & Co., Washington, D. C. TT 1.5: SP 0.3: P 1.2: RC 1.2. Jan.-April 1919 in office of County Engr., Marshall County, Marshalltown, Iowa, on design of reinforced concrete bridges and culverts. TT 0.3: P 0.3: RC 0.3: D 0.3. May-Sept. 1919 in office of City Engr., Marshalltown, Iowa, as Res. Engr. in charge of constructing water mains and pavements. TT 0.4: P 0.4: RC 0.4. Oct.-Dec. 1919 Res. Engr. for H. R. Green, Cons. Engr., Cedar Rapids, Iowa, in charge of constructing sewer systems and disposal plant at Strawberry Point, Iowa. TT 0.3: P 0.3: RC 0.3. Jan.-Feb. 1920 with W. I. Peoples, Philadelphia, Pa., made preliminary survey for water-works improvement at Media, Pa. TT 0.2: P 0.2: RC 0.2. March-Oct. 1920 Locating Engr. and Res. Engr., Virginia Highway Comm., Richmond, Va., in charge of locating and constructing top soil and water-bound macadam roads. TT 0.7: P 0.7: RC 0.7. Nov. 1920-April 1924 with South Carolina Highway Dept., Columbia, S. C., on design, and Res. Engr., in charge of constructing highways and bridges. TT 3.5: P 3.5: RC 3.5: D 0.5. May to June 1924 with Abbeyville County (S. C.), Highway Comm., designing steel bridges. TT 0.2: P 0.2: RC 0.2: D 0.2. July 1924-Sept. 1925 Constr. Foreman, Tucker & Laxton, Inc., Contrs., Charlotte, N. C., on reinforced concrete dam and power house, transformer house and two filter plants. TT 1.3: P 1.3: RC 1.3. Oct. 1925 to date Res. Engr., Solomon, Norcross & Kels, Inc., Cons. Engrs., Atlanta, Ga., Troy, N. Y. and Ft. Lauderdale, Fla., in charge of construction of sewage-treatment plants at Sebring, and Ft. Lauderdale, Fla. and drainage canal at Mountain Lake, Fla.; made preliminary survey for sewage disposal at Haines City, Fla. TT 1.3: P 1.3: RC 1.3. TT 13.7: SP 3.3: P 10.4: RC 10.4: D 1. Refers to F. J. Kels, K. Lindsey, M. T. Singleton, G. R. Solomon, H. F. Wiedeman.

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(1) **GARCIA VOUILLOZ, ERNEST BENJAMIN**, Argentine Consulate, Paris, France. (Age 28. Born Tandil, Provincia de Buenos Aires, Argentine.) 1925 B. C. in C. E., Ohio Northern Univ. TT 2: SP 2. June to Aug. 1925 with Univ. of Wisconsin, laboratory work. TT 1: SP 1. Oct. 1925 to May 1926 student, Armour Inst. (night school) advanced structures and (during day) on comparative design and investigation of important types of bridges. TT 1: P 1. May to June 1926 in shops of American Bridge Co., Gary, Ind. TT 0.1: SP 0.1. June to Nov. 1926 Laborer, John Griffiths & Son Co., Chicago, Ill., on Soldiers Field Stadium, and since July 1926 on Builder's Bldg. TT 0.5: SP 0.5. TT 3.7: SP 2.7: P 1. Refers to R. L. Stevens, A. R. Webb. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(11) **GARDNER, RUSKIN TENNY**, 212 South Arno St., Albuquerque, N. Mex. (Age 23. Born Thatcher, Ariz.) 1926 B. S. in C. E., Univ. of Ariz. TT 2: SP 2. June 1926 to date Draftsman, Middle Rio Grande Conservancy Dist., on maps, checking hydraulic and structural designs, etc. TT 0.5: SP 0.5. TT 2.5: SP 2.5. Refers to J. L. Burkholder, C. H. Howell, F. C. Kelton.

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(7) **GATLEY, HAROLD KENT**, P. O. Box 117, Ann Arbor, Mich. (Age 35. Born Portland, Me.) Oct. 1910 to June 1912 and Oct. 1913 to June 1914 student, Eng. Dept., Univ. of Michigan. TT 1: SP 1. Oct. 1912 to Oct. 1913 unit cost and layout work on building construction, Norcross Bros. Co., Worcester, Mass. TT 1: SP 1. July 1914 to May 1915 Inspector on field work, with M. E. Cooley, Appraiser. TT 0.8: SP 0.8. May to Nov. 1915 Surveyor Draftsman, Maine Central R. R., Portland, Me. TT 0.5: SP 0.5. Nov. 1915 to Nov. 1918 Asst. Engr. and Res. Engr., Moulton Eng. Corporation, Portland. TT 3: SP 1.5: P 1.5: RC 1: D 0.5. Dec. 1918 to Jan. 1919 Estimator, office work on appraisal. TT 0.2: SP 0.2. April to Oct. 1919 structural design and estimating, The A. Bentley & Sons Co., Toledo, Ohio. TT 0.5: SP 0.5. Oct. 1919 to March 1925 Structural Designer, Res. Engr. and Prin. Asst. Engr. with W. G. Clark, Cons. Engr., Toledo. TT 5.4: SP 1: P 4.4: RC 2.4: D 2. March 1925 to date Chf. Draftsman and Designer with Hoad, Decker, Shoecraft & Drury, Cons. Engrs., Ann Arbor, Mich. TT 1.8: P 1.8: RC 1: D 0.8. TT 14.2: SP 6.5: P 7.7: RC 4.4: D 3.3. Refers to F. G. Cunningham, A. J. Decker, W. R. Drury, W. C. Hoad, R. L. McNamee, G. N. Schoonmaker, E. C. Shoecraft.

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(2) **GILBOY, GLENNON**, 397 Commonwealth Ave., Boston, Mass. (Age 24. Born Duryea, Pa.) 1925 S. B., Mass. Inst. Tech. TT 2: SP 2. June 1917 to Sept. 1921 Architectural Draftsman, construction superintendence and estimating, with John J. Hawley, Scranton, Pa.

TT 3: SP 3. Sept. 1925 to date with C. E. Dept., Massachusetts Inst. of Technology, 1 year as Asst. in structures, hydraulics, etc., instruction in surveying, and since Sept. 1926 Research Asst. in soil mechanics. TT 1.3: SP 1.3. TT 6.3: SP 6.3. Refers to J. B. Babcock, 3d., H. K. Barrows, C. B. Breed, G. E. Russell, C. M. Spofford, C. Terzaghi.

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(1) GRIFFITH, LYHLE GEORGE, 555 West 184th St., New York City. (Age 25. Born Montezuma, Iowa.) April 1923 to May 1924 Surveyman, U. S. E. D., river and harbor surveys in Illinois River, and second in charge of dredging operations, also dredging location and map drafting. TT 1.1: SP 1.1. May 1924 to June 1925 Engr., U. S. Industrial Alcohol Co., general charge of construction layout, and superintendence of construction, some design: survey and records of company's property. TT 1.2: P 1.2: RC 1.2. June 1925 to March 1926 private work, South Florida, surveys and subdivisions, field and office. TT 0.7: P 0.7. March 1926 to date Party Chf., City of Miami, being Chf. of transit and level party, on general field work for Dept. of Sewage Disposal and Bureau of Surveys. TT 0.7: P 0.7: RC 0.7. TT 3.7: SP 1.1: P 2.6: RC 1.9. Refers to W. E. Dawson, H. F. Ferguson, S. A. Greeley, P. Hansen, F. H. Mann, C. S. Nichols, C. A. Slayton.

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(9) GROCHAU, EARL HENRY, Box 487, Morehead, Ky. (Age 28. Born Duluth, Minn.) 1921 B. Sc. in Civ. Eng., Univ. of Minn. TT 2: SP 2. July to Oct. 1918 Rodman, Chicago, Milwaukee & St. Paul R. R. July to Nov. 1921 Jun. Engr., City of St. Paul, Minn., in charge of testing building materials, etc. TT 0.3: SP 0.3. Aug.-Sept. 1919 and Feb. 1922 to March 1923 with Minnesota State Highway Dept., as Instrumentman, and Computer and Estimator on design and computation of trunk highways, alignment design, location of drainage structures, etc. TT 1.1: SP 1.1. March 1923 to Jan. 1926 with Gauger Korsmo Constr. Co., Memphis, Tenn., as follows: March to Aug. 1923 Timekeeper and Material Clerk, on waterworks, and Aug. to Dec. 1923 Asst. Supt. in charge of construction of 23 well houses, for City of Memphis; Dec. 1923 to May 1924 Engr. on construction of Lowenstein Bldg., being Office Asst. to Supt. and in charge of office organization, checking construction details, cost records, etc.; May to June 1924 Asst. Estimator on building construction; June to Nov. 1924 Supt. in charge of construction, Bellevue Subway, Memphis; after Nov. 1924 Engr. and Asst. Supt., on Tampa (Fla.) Water Works, construction layout work, checking details, etc. TT 2.8: SP 2.1: P 0.7: RC 0.7. Jan. to June 1926 Estimator, Burton Cast Stone Co., Tampa, estimating on building construction plans, ornamental and general plastering work, stone layout, setting plans, etc. TT 0.4: P 0.4: RC 0.4. Aug. 1926 to date Supt. of Constr., E. G. Holladay Co., Nashville, Tenn., in charge of construction of two Normal School buildings, Morehead, Ky. TT 0.3: P 0.3: RC 0.3. TT 7: SP 5.5: P 1.5: RC 1.5. Refers to F. Bass, G. H. Buck, R. G. Church, A. S. Cutler, P. C. Gauger, W. N. Jones.

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(13) GUMENSKY, DMITRY BENJAMIN, Emigrant Gap, Cal. (Age 29. Born Ufa, Russia.) 1925 B. S., C. E. Dept., Univ. of Cal. TT 2: SP 2. May 1925 to date Rodman, Recorder, Draftsman, Inspector, Instrumentman and Chf. of Party, with F. H. Tibbetts, San Francisco, Cal. TT 1.5: SP 1.4: P 0.1. TT 3.5: SP 3.4: P 0.1. Refers to E. E. Blackie, R. E. Davis, C. Derleth, Jr., R. Matthew, F. H. Tibbetts, R. G. Wadsworth, H. I. Wood.

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(15) HARVEY, THOMAS WILLIAM, 1107 Mercantile Bank Bldg., Dallas, Tex. (Age 22. Born Dallas, Tex.) March 1923 to Nov. 1924 with Myers & Noyes, Engrs., Dallas, Tex., until Oct. 1923 as Rodman, then Inspector of paving, sewer, water and concrete. TT 1.7: SP 1.7. Nov. 1924 to date Draftsman and Estimator with Myers & Noyes and Myers, Noyes & Forrest, on subdivision and levee work. TT 2.1: SP 2.1. TT 3.8: SP 3.8. Refers to C. T. Baer, V. R. Brady, T. C. Forrest, Jr., E. L. Myers, E. N. Noyes, C. S. Reagan.

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(5) HAWKINS, RALPH LIVINGSTON, 430 Clifford Ave., Potomac Alexandria, Va. (Age 22. Born Alexandria, Va.) 1926 C. E., Univ. of Va. TT 2: SP 2. July to Sept. 1923 and June to Sept. 1924 Rodman and Transitman, Richmond, Fredericksburg & Potomac R. R. Co. (1923) and with George E. Garrett, Civ. Engr., Potomac, Va. (1924). Sept. 1923 to June 1926 Instructor in Plane Surveying and Applied Mathematics, Univ. of Virginia. June to Sept. 1925 Transitman, and June to Dec. 1926 Asst. Engr. on design, with S. B. Williamson, Cons. Engr., Charlottesville, Va. TT 0.5: P 0.5: D 0.5. TT 2.5: SP 2: P 0.5: D 0.5. Refers to A. C. Matthews, Jr., J. P. Smith, L. H. Williamson, S. B. Williamson.

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(3) HAWKINS, STANLEY MORRISON, Orchard Park, N. Y. (Age 27. Born Buffalo, N. Y.) Sept. 1921 to June 1922 student, Univ. of Cincinnati. TT 0.3: SP 0.3. July to Oct. 1922 and Feb. 1923 to date with Frederick K. Wing Co., Buffalo, N. Y., as follows: July to Oct 1922 Rodman and Chainman; Feb. to June 1923 and Jan. to June 1924 Chf. of Party and

(1924) Asst. to Mr. Wing; June 1923 to Jan. 1924 and June to Dec. 1924; Res. Engr. in charge of construction of sewer system and sewage-disposal plants at Bladell and Wanakah, N. Y.; Dec. 1924 to date Asst. Engr. planning sewers, Wanakah, N. Y., planning sewage-disposal plant, in charge of construction of Lackawanna (N. Y.) sewage-disposal plant, etc. TT 4.3: SP 0.3: P 4: RC 2.5: D 0.6. TT 4.7: SP 0.7: P 4: RC 2.5: D 0.6. Refers to J. H. Feigel, C. L. Howell, A. P. Skaer, G. F. Unger, F. K. Wing.

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(11) HEDGER, HAROLD EVERETT, 1456 Elm Ave., Long Beach, Cal. (Age 28. Born Riverside, Cal.) 1924 B. S., Coll. of Civ. Eng., Univ. of Cal. TT 2: SP 2. May to June 1919 Levelman, San Joaquin Light & Power Co. TT 0.1: SP 0.1. Dec. 1919-March 1920 Instrumentman with County Surveyor, Los Angeles County. TT 0.3: SP 0.3. July to Aug. 1921 Field Draftsman, Bureau of Light and Power, Los Angeles, Cal., topographic surveying and dam location. TT 0.1: SP 0.1. June-Nov. 1919 Instrumentman, April 1920-April 1921 Draftsman and July 1922 to Aug. 1923 Field Draftsman, Los Angeles County Flood Control Dist., topographic surveying and dam location. TT 2.7: SP 2.7. May 1924 to date with same District, until March 1925 as Senior Draftsman on design and in responsible charge of construction of storm drain channels and auxiliary structures; then Res. Engr. in responsible charge of construction of storm drain channels, bridges and other timber and concrete structures. TT 2.5: P 2.5: RC 1.8: D 0.7. TT 7.7: SP 5.2: P 2.5: RC 1.8: D 0.7. Refers to R. E. Ballinger, B. Harmon, B. Jameyson, A. Jones, F. C. McMillan, H. C. Mower, A. K. Warren.

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(6) HILL, LOUIS HAWES, Holley Ave. S. S., Charleston, W. Va. (Age 27. Born Bluefield, W. Va.) 1925 B. S. C. E., W. Va. Univ. TT 2: SP 2. June to Sept. of years 1912-1917 Rodman for Geo. H. Hill, Civ. Engr. and Archt., Bluefield, W. Va. March to Sept. 1919 Rodman, U. S. Naval Ordnance Plant, South Charleston, W. Va., 3 months running level. June to Sept. 1923 (one-half of time) Draftsman, City of Morgantown, W. Va., detailing and tracing for sewers, paving, etc. TT 0.6: SP 0.6. Sept. to Dec. 1923 Draftsman, State Road Comm., Charleston, detailing and tracing for road work, some bridge tracing. Jan. to April 1924 Draftsman, C. & P. Telephone Co., Charleston, mapping telephone system (Inventory). TT 0.3: SP 0.3. April 1924 to date with City of Charleston, until Jan. 1925 as Draftsman, detailing, tracing and estimating for paving, sewers, culverts, etc.; then Chf. Draftsman, and since Jan. 1926 Office Engr., on sewers, paving, retaining walls, underground railway crossings, real-estate development layouts, etc. TT 2.8: P 2.8: RC 2.2: D 1.2. TT 6: SP 3.2: P 2.8: RC 2.1: D 1.2. Refers to H. L. Campbell, C. P. Fortney, G. H. Hill, C. E. McCoy, C. M. Ross, W. D. Sell.

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(7) HOPPE, FRIEDRICH ADOLF, 603 Second St., Jackson, Mich. (Age 37. Born Wald, Germany.) 1914 Dipl. Ing., Technische Hochschule, Berlin, Germany. TT 2: SP 2. Aug. to Oct. 1911 Field Engr., German Govt., Duesseldorf, on erection of steel bridge over Rhine River. March to April and Aug. to Oct. 1913 Designer of water-purifying station and boiler house, City of Solingen. 1915 to 1918 with German Govt., being Instructor as Engr. Lieut., German Navy, and Designing and Erection Engr., 1 year north of Russia, building reinforced concrete fortifications, steel and timber bridges, and roads. TT 3.5: P 3.5: RC 2. Dec. 1918 to June 1919 Designer of sewer system, siphon, etc., City of Chemnitz. TT 0.6: P 0.6: D 0.6. Aug. 1919 to Jan. 1921 with Suedwestdeutscher Kanalverein E. V., Stuttgart, on supervision of layouts for river rectifications, including locks, power stations and harbor of Necker River, arranging exhibitions, etc. TT 1.5: P 1.5: RC 1.5. Feb. 1921 to Sept. 1922 with Ausstellungsgesellschaft, Essen, commercial and technical supervision of erection of industrial exhibition. TT 1.5: P 1.5: RC 1.5. Jan. to Aug. 1923 Cons. Engr., Grosshandels & Lagerel, Berufsgenossenschaft, Berlin, Cons. Engr., supervision of factories at Berlin and Prov. of Brandenburg, Sachsen and Pommern. TT 0.6: P 0.6: RC 0.6. Sept. to Nov. 1923 Designer of steel construction, Ludlum Steel Co., Watervliet, N. Y. TT 0.2: P 0.2: D 0.2. Nov. 1923-Feb. 1924 Designer of steel and reinforced concrete construction, American Steel & Wire Co., Cleveland. TT 0.3: P 0.3: D 0.3. March to June 1924 Designer of steel superstructure for travelling crane, Chisholm Moore Mfg. Co., Cleveland. TT 0.4: P 0.4: D 0.4. June 1924-Feb. 1926 Designer for heavy steel, reinforced concrete and timber construction, Cleveland Elec. Illuminating Co. TT 1.7: P 1.7: D 1.7. March 1926 to date Designer of steel, reinforced concrete construction, Commonwealth Power Co., Jackson, Mich. TT 0.8: P 0.8: RC 0.8. TT 13.1: SP 2: P 11.1: RC 5.6: D 4. Refers to E. M. Burd, F. B. Kiel, E. Maerker, N. Van Eenam, P. A. Vickers.

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(1) IVANCHENKO, ANDREI IVANOVICH, P. O. Box 30, Okono, Novoherkassk Don, U. S. S. R. (Age 36. Born Armavir, Russia.) Nov. 1907 to Oct. 1915 (3½ years of course

completed) Student in Civ. Eng., Petrograd Peter the Great Polytechnic Inst. *TT 1: SP 1.* May to Sept. 1908 Draftsman, and June to Sept. 1909 Draftsman and Designer in office of Municipal Engr., City of Stavropol, Russia. Jan. to June 1910 Foreman on construction of municipal electric station, Stavropol, during installation of machines, concrete foundations, finishing of buildings, etc. *TT 0.4: SP 0.4: RC 0.3: D 0.3.* June to Sept. 1910 Asst. to Municipal Engr., Stavropol. *TT 0.2: SP 0.2: RC 0.2: D 0.2.* Oct. to Nov. 1910 Draftsman Copier on construction of Peter the Great Bridge, Petrograd. *TT 0.1: SP 0.1.* May to Sept. 1911 Asst. to Municipal Civ. Engr. and later Supt. on erection of large stone college building (\$75 000) at Stavropol. *TT 0.3: P 0.3: RC 0.3: D 0.3.* Oct. 1911 to June 1912 Draftsman and Asst. in designing of hydro-electric power plants at office of Prof. B. A. Bakhmeteff. *TT 0.7: P 0.7: RC 0.4: D 0.4.* June to Sept. 1912 Supt. of construction of city water-works with 6 miles of pipe line, and in charge of surveying. *TT 0.2: P 0.2: RC 0.2.* Sept. to Nov. 1912 in charge of surveying on river in middle Russia for hydro-electric power plant, by order of Prof. B. A. Bakhmeteff. *TT 0.2: P 0.2: RC 0.2.* Dec. 1912 to June 1913, Dec. 1913 to June 1914 and May to Sept. 1915 edited lectures of Prof. B. A. Bakhmeteff on hydraulics in Civ. Eng. course of Polytechnic Institute of Petrograd. Nov. 1912 to Aug. 1913 in charge of drafting room, Asst. Designer in hydro-electric installations and Hydrologist at office of Prof. B. A. Bakhmeteff, directing drafting, designs and hydrological works. *TT 0.7: P 0.7: RC 0.7: D 0.7.* Aug. 1913 to Dec. 1913 and June to July 1914 in charge of plane-table surveying on two rivers for hydro-electric power plants, and July to Oct. 1914 made and issued a calculating table for pipes, under Prof. B. A. Bakhmeteff, Petrograd. *TT 0.6: P 0.6: RC 0.6.* May to Sept. 1915 special works at Hydraulic Laboratory of Petrograd Polytechnic Inst. *TT 0.3: P 0.3: RC 0.3.* Dec. 1918 to Oct. 1919 Designing Engr., Pennsylvania Water & Power Co., Baltimore, Md. *TT 0.8: P 0.8: RC 0.8: D 0.8.* Aug. 1921 to Oct. 1923 Asst. Prof. of Irrigation, Inst. of Agriculture and Irrigation, Stavropol. *TT 2.2: P 2.2: RC 2.2.* Oct. 1923 to March 1924 Teacher in Technical English and Hydraulics, Agricultural Technicum, Stavropol. *TT 0.4: P 0.4: RC 0.4.* Aug. 1924 to March 1925 in charge of survey and on preliminary designs for hydro-electric developments on Backsan and Malka Rivers Caucasus of Electro-Bureau of North Caucasus. *TT 0.6: P 0.6: RC 0.6: D 0.6.* March 1925 to Sept. 1925 in charge of topographic parties surveying for a hydro-electric power plant (20 000 h. p.), Electro-Bureau of North Caucasus. On hydrological and hydrographic survey on two rivers, Commissariat for Ways and Communications and Designer of river discharge installations. *TT 0.6: P 0.6: RC 0.6: D 0.6.* Oct. 1925 to Jan. 1926 in charge of hydro-geological investigations of the Terek District, North Caucasus. *TT 0.3: P 0.3: RC 0.3.* Jan. 1926 to date Senior Engr. in Hydrology, North Caucasus Experimental Irrigation, Bureau of Reclamation Service of Commissariat for Agriculture R. S. E. S. R., in charge of all hydrological investigations of office on the North Caucasus territory, etc. Since July 1926 also Cons. Hydr. Engr. at Reclamation Service of Commissariat for Agriculture of Daghestan Republic on the North Caucasus; organization and direction of stream-gauging, flood-control and flood-protection service and hydrological and hydrographical investigations on the Daghestan Rivers. *TT 1.1: P 1.1: RC 1.1: TT 10.8: SP 1.7: P 9: RC 9.3: D 3.8.* Refers to F. W. Abbot, B. A. Bakhmeteff, N. C. Grover, R. E. Horton, J. A. Walls.

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(13) JAMES, JAMES SPIER, 1316 Benito St., Burlingame, Cal. (Age 44. Born La Crosse, Wis.) Sept. 1902 to Oct. 1905 student, School of Mines, Univ. of Minnesota (1 year) and Colorado School of Mines (2 years). *TT 1: SP 1.* Oct. 1905 to March 1918 member of firm, Ingersoll, Bell & James, mining and civil engineering, offices at Denver, Telluride and Ouray; U. S. Deputy Mineral Surveyor, City Engr., Telluride, Colo., County Engr., San Miguel County, mine examinations. *TT 12.5: P 12.5: RC 5: D 7.5.* April 1918 to Sept. 1922 Gen. Mines Supt., Radium Co. of Colorado, operating carnotite mines in Colorado and Utah. *TT 4.5: P 4.5: D 4.5.* Oct. 1922 to Oct. 1923 Gen. Supt., Colorado Corporation, operating Rawley Mines, Salida, Colo., developing ore reserves in mine, construction of aerial tramway to railroad, and of 300-ton mill. *TT 1: P 1: D 1.* Oct. 1923 to date in private practice of civil engineering at Burlingame, Cal., subdivision surveying and engineering, design of municipal improvements; also City Engr. *TT 3.2: P 3.2: D 3.2. TT 22.2: SP 1: P 21.2: RC 5: 16.2.* Refers to A. J. Grier, W. C. Hammatt, M. M. O'Shaughnessy, J. M. Owens, E. C. Thomas, E. H. Warner.

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(8) JENKINS, CARTER, 545 Prairie Ave., Des Plaines, Ill. (Age 33. Born Hot Springs, Ark.) 1915 A. B., Hendrix Coll., Conway, Ark. 1921 B. S. in C. E., and 1926 C. E., Univ. of Ill. *TT 2: SP 2.* May 1917 to April 1919 with U. S. Army, until Aug. 1917 as Student, First Officers' Training Camp, Ft. Roots, Little Rock, Ark., then Capt. 334th Field Artillery, Orientation Officer and Regimental Adj. *TT 1.9: SP 1.9.* April to Oct. 1919 Instrumentman-

Eng. Inspector, with Lund & Hill, Little Rock, Ark., on highway location and construction also on construction of municipal improvements. TT 0.6: SP 0.6. Oct. 1919 to June 1921 student, Coll. of Eng., Univ. of Illinois. June to Oct. 1920 Instrumentman, Baxter Eng. Co., Little Rock, on drainage work. July 1921 to Aug. 1926 Inspector, Res. Engr. and Supervision Engr., Illinois State Highway Dept., in charge of surveys, design and construction around Chicago. TT 5.1: SP 0.5: P 4.6: RC 4.6: D 2. Aug. 1926 to date Asst. Engr. with W. H. Allen, Cons. Engr., Des Plaines, Ill., in charge of design of municipal improvements. TT 0.4: P 0.4: RC 0.4: D 0.4. TT 10: SP 5: P 5: RC 5: D 2.4. Refers to W. H. Allen, O. G. Baxter, C. A. Case, C. M. Hathaway, C. C. Williams, W. M. Wilson.

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(1) JOHNSON, ANDREW KINGHORN, 190-24 One Hundred and Eleventh St., Hollis, N. Y. (Age 44. Born Liverpool, England.) 1922 Licensed Prof. Engr. and Land Surveyor, New York State. 1918 B. S. in C. E., and 1921 C. E., Cooper Inst. for Advancement of Sci. and Art. June 1906 to Feb. 1914 with Board of Water Supply, New York City, on Catskill Aqueduct until Sept. 1907 as Axeman, acting as Asst. on survey party, then Rodman, acting as Instrumentman and Party Chf. on property locations and construction, and after Jan. 1910 Topographical Draftsman, designing sanitary structures, culverts, etc., making construction drawings and estimates. TT 7.7: SP 3.5: P 4.2: RC 1: D 2. Feb. 1914 to date in office of Pres., Borough of Queens, New York City, until Feb. 1918 as Topographical Draftsman, investigating, estimating and reporting on petitions for local improvements; then Asst. Engr., in charge of drafting room, being responsible for contract drawings for public improvements, including design of culverts, bulkheads and bridges, and since June 1924 Asst. Engr., being Prin. Asst. to Engr. of Highways, assisting in direction of all work of Dept., including construction work. TT 12.8: P 12.8: RC 6.8: D 2. TT 20.5 SP 3.5: P 17: RC 7.8: D 4. Refers to A. H. Eccles, H. K. Endemann, E. W. Firth, A. Levin, C. B. Moore, J. F. Perrine, C. U. Powell.

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(7) JOHNSON, JAMES RUPERT, 1125 Eighth St. S. E., Minneapolis, Minn. (Age 23. Born Elmdale, Minn.) 1926 B. S., Univ. of Minn. TT 2: SP 2. June to Sept. 1924 Rodman, with J. E. Viner, Little Falls, Minn. June to Sept. 1926 Inspector, Minnesota Highway Dept. TT 0.3: SP 0.3. Sept. 1926 to date Research Fellow, Structural Dept., Coll. of Eng., Univ. of Minnesota. TT 0.2: P 0.2. TT 2.5: SP 2.3: P 0.2. Refers to F. Bass, A. S. Cutler, J. O. Jones, O. M. Leland.

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(13) KAZAN, JAMES, 401 Custom House, San Francisco, Cal. (Age 28. Born Haverhill, Mass.) 1923 A. B., Stanford Univ. TT 2: SP 2. Oct. 1923 to Jan. 1924 post-graduate student, in valuation research Stanford Univ. TT 0.3: P 0.3. March to Sept. 1924 Draftsman, Grinnell Co. of the Pacific, designing fire sprinklers. TT 0.5: SP 0.5. Oct. 1924 to date with U. S. Engr. Office, San Francisco, until May 1926 as Draftsman on computations, checking estimates and designs, and since June 1926 Jun. Engr. in charge of cost keeping. TT 2.1: SP 1.6: P 0.5. TT 4.9: SP 4.1: P 0.8. Refers to L. Griswold, C. D. Marx, G. F. Whittemore, C. B. Wing.

163

(1) KEENAN, JAMES NICHOLAS, 285 Madison Ave., New York City. (Age 41. Born Brooklyn, N. Y.) 1909 C. E., Cornell Univ. TT 2: SP 2. June 1907 to Feb. 1908 Instrumentman and Draftsman on stadia topographic survey, New York State Water Supply Comm. TT 0.8: SP 0.8. June 1909 to Feb. 1911 Draftsman on subway and barge canal work, New York City and Albany. TT 1.5: SP 1.5: D 1.5. Feb. 1911 to Dec. 1913 with H. L. Cooper, Keokuk, Iowa, until Oct. 1911 as Draftsman on hydro-electric power plant, design and detail of special cranes, hydraulic studies of back water slope, turbine scroll cases, dam cross-sections, Nov. 1911 to Nov. 1912 Carpenter's Helper, Interpreter of drawings for foremen, Asst. to Supt. on construction of power-house substructure and locks and after Dec. 1912 Foreman, building power-house, substructure forms, temporary timber trestle, floating booms. TT 2.8: P 2.8: RC 1: D 1. Jan. to March 1914 Asst. Designing Engr. for W. S. Barstow, New York City, designed small truss and I-beam bridges for hydraulic pipe-line and steel pipe-line intake for small high-head hydro-electric plant. TT 0.2: P 0.2: D 0.2. April to July 1914 Field Engr., H. E. Talbot Co., Dayton, Ohio, Gen. Contr. on construction of dam and power-house for Laurentide Paper Co., Grande Mere, Quebec, planned part of construction plant layout, designed and directed construction of power-house form work for draft tubes and scroll cases. TT 0.3: P 0.3: RC 0.3: D 0.3. July 1914 to Dec. 1925 with H. H. Robertson Co., Mfrs. of Bldg. Material Specialties, Pittsburgh, Pa., until Dec. 1916 as Chf. Engr., directed estimating, making of shop bills, experimental and development work and contract work (approx. \$1 250 000) for installation of products; 1916 designing and constructing new manufacturing plant (cost approx. \$800 000 equipped); after Jan. 1917 Mgr., New

York Dist., directing work of sales force and construction organization. *TT 11.5: P 11.5: RC 11.5: D 2.* Dec. 1925 to date in private practice of engineering; supervised construction of amusement resort for Maderia Corporation, St. Petersburg, Fla. (cost \$75 000); laid out manufacturing plant for Good Humor Ice Cream Co., New York City; designed reinforced concrete framing (\$200 000) for mausoleum for Fairmount Cemetery Corporation, Newark, N. J. *TT 1: P 1: RC 1: D 1.* *TT 20.1: SP 4.3: P 15.8: RC 13.8: D 6.* Refers to R. V. Banta, W. T. Chevallier, H. L. Cooper, C. A. McCollough, L. H. Miller, H. M. Nelson.

## 164

(8) KING, OTTO LARUE, 156 North Oak Park Ave., Oak Park, Ill. (Age 23. Born River-ton, Ill.) 1926 B. S. in C. E., Univ. of Ill. *TT 2: SP 2.* June to Sept. 1923 Rodman, Baker, Agarter & Thompson Constr. Co., Indianapolis, Ind. June to Sept. 1924 Highway Inspector, and June to Sept. 1925 Jun. Testing Engr., Illinois State Highway Dept., Springfield, Ill. June to Aug. 1926 Draftsman, Illinois State Water Survey, Urbana, Ill. *TT 0.1: SP 0.1.* Oct. 1926 to date Asst. in operations, Constr. Dept., Public Service Co. of Northern Illinois Chicago, Ill. *TT 0.2: SP 0.2.* *TT 2.3: SP 2.3.* Refers to E. E. Bauer, R. R. Benedict, M. L. Enger, T. D. Mylrea, G. W. Pickels, C. C. Williams.

## 165

(11) KING, ROY HENSLEY, 3422 Herbert St., San Diego, Cal. (Age 31. Born Willows, Cal.) Oct. 1917 to July 1918 Engr.-Draftsman, Liberty Iron Works, Airplane Mfrs., designing and drafting. *TT 0.7: SP 0.2: P 0.5: D 0.5.* July to Dec. 1918 at Non-Commissioned Officers' school, Ft. Scott, San Francisco, Cal., on mathematical problems for coast artillery work, plotting, etc. *TT 0.4: SP 0.2: P 0.2.* Jan. to Nov. 1919 Designing Engr., All-In-One Tractor Co., on tractor for farm use. *TT 0.9: P 0.9: RC 0.9: D 0.9.* Nov. 1919 to date with California Corrugated Culvert Co., 2½ years at West Berkeley, Cal., drafting and later on mechanical design, sheet-metal pattern layout and development of labor-saving devices; and remainder of time at Los Angeles, Cal., on sales engineering, assisting engineers using Company's material. *TT 6.7: SP 3.2: P 3.5: RC 3.5.* *TT 8.7: SP 3.6: P 5.1: RC 4.4: D 1.4.* Refers to R. S. Carberry, W. G. Gough, T. H. King, S. L. Rothery, F. W. Slattery, P. R. Watson.

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(3) MACPHAIL, JEFFREY BURLAND, 26 Selkirk Ave., Montreal, Que., Canada. (Age 32. Born Montreal, Que., Canada.) 1914 B. A., and 1921 B. Sc., McGill Univ., Montreal, Que., Canada. *TT 2: SP 2.* Aug. 1914 to Feb. 1919 N. C. O. (1½ years), Lieut. (1½ years) and Capt. (1½ years), Canadian Engrs., Overseas Military Forces of Canada, in France with Field Company and staff duties (3½ years), Adj. in France and England, Brigade Major in England. *TT 4.6: SP 3.6: P 1: RC 1.* Sept. 1921 to Feb. 1922 with Moran, Maurice & Proctor, New York City, on drafting, heavy concrete design and mathematical work. *TT 0.5: P 0.5.* Nov. 1922 to date with Power Eng. Co. (formerly Shawinigan Eng. Co.), Montreal, drafting, design in concrete, steel and hydraulics, hydro-electric reports and estimates, mathematical work. *TT 4.2: P 4.2: RC 2: D 3.5.* *TT 11.3: SP 5.6: P 5.7: RC 3: D 3.5.* Refers to J. B. Challies, R. S. Lea, W. S. Lea, H. M. MacKay, D. E. Moran, J. C. Smith.

## 167

(14) McFADDEN, HENRY SAMUEL, 1233 Western Ave., Topeka, Kans. (Age 54. Born in Colfax Township, Kans.) July 1910 to July 1918 City Engr. and County Engr., Fredonia, Kans. *TT 8: P 8: RC 8: D 8.* July 1918 to July 1919 Asst. Engr., Kansas State Highway Comm. *TT 1: P 1.* July 1919 to date head of Kansas Eng. Co., Topeka, Kans. *TT 7.5: P 7.5: RC 7.5: D 2.5.* *TT 16.5: P 16.5: RC 15.5: D 10.5.* Refers to W. V. Buck, O. J. Eldmann, F. W. Epps, R. H. Pennartz, L. B. Smith, M. W. Watson.

## 168

(11) MAYER, EDWARD BROMLEY, 933 West Fifty-Third St., Los Angeles, Cal. (Age 36. Born Hartford, Conn.) 1909 to 1917 Chairman, Rodman, Leveler, Transitman, Draftsman, Computer and Chf. of Party for various employers. *TT 8: SP 7: P 1.* Nov. 1917 to date with Bureau of Water Works and Supply until Jan. 1920 as Instrumentman in charge of tunnel lines and grades, hydrographic studies and records; Jan. 1920 to Jan. 1924 Draftsman, special drawings, profile and grade studies for large water mains, special hydrographic studies, Jan. 1924 to June 1925 Engr. in responsible charge of drafting room on designs, specifications and estimates in connection with water-works construction, and since June 1925 Engr. on establishment and in responsible charge of Water Cost Div., outlining accounting procedure, re-classification of accounts, design and control of Budget Bureau, etc. *TT 9.2: SP 4: P 5.2: RC 3.8: D 3.2.* *TT 17.2: SP 11: P 6.2: RC 3.8: D 3.2.* Refers to A. R. Arledge, W. W. Hurlbut, H. L. Jacques, D. A. Lane, W. Mulholland, J. E. Phillips, H. A. Van Norman.

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(2) MELTZER, FRED CARL, 33 Bay State Road, Boston, Mass. (Age 21. Born Mexico City, Mexico.) 1926 B. S., Case School of Applied Sci. TT 2: SP 2. June to Sept. 1926 drafting with Glenn L. Martin Co., Cleveland, Ohio. TT 0.2: SP 0.2. Oct. 1926 to date graduate student, Massachusetts Inst. of Technology. TT 0.2: SP 0.2. TT 2.4: SP 2.4. Refers to C. A. Miller, F. H. Neff, G. E. Russell, C. M. Spofford, C. Terzaghi.

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(7) MILLER, ARTHUR PHILLIPS, 9373 East Jefferson Ave., Detroit, Mich. (Age 24. Born Merchantville, N. J.) 1924 B. S., Worcester Pol. Inst. TT 2: SP 2. Sept. 1924-Feb. 1925 Draftsman for E. Worthington, Civ. Engr., Dedham, Mass., computation and drafting of surveys. TT 0.5: SP 0.5. March-May 1925 Jun. Draftsman, and June 1925 to date Senior Draftsman, Dept. of Water Supply, Div. of Eng., Bureau of Land Tunnels, Detroit, Mich., on drafting and computations, including hydraulic and structural design, making tests and analyzing results, preparing and checking estimates. TT 1.9: SP 1.9. TT 4.4: SP 4.4. Refers to C. M. Allen, T. Elde, G. H. Fenkell, A. W. French, H. S. Grassman, L. G. Lenhardt, F. H. Stephenson.

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(8) MORRISON, BENJAMIN FRANKLIN, 1521 East Sixty-Eighth St., Chicago, Ill. (Age 31. Born Chicago, Ill.) Licensed Structural Engr., State of Illinois. 1922 B. S. in Civ. Eng., Armour Inst. Tech. 1926 J. D. Chicago Law School. TT 2: SP 2. Has been Draftsman for The Pullman and Western Elec. Cos., and Inspector for City Bridge Dept., Chicago and (1918) with U. S. Army. May to Sept. 1919 Draftsman, Leonard Constr. Co., detailing and designing steel structures. May to Aug. 1922 Structural Engr., Coolidge & Hodgdon, Archts., Chicago, Ill., being Engr. and Supt. TT 0.2: P 0.2: RC 0.2. Aug. to Dec. 1922 Designing Engr., Bridge Engr.'s office, Chicago, Burlington & Quincy R. R. TT 0.3: P 0.3: D 0.3. Dec. 1922 to date with City of Chicago, until June 1924 as Structural Engr., Board of Education, and since then Engr., Board of Local Improvements, being Designing Engr. TT 4: P 4: RC 1: D 3. TT 6.6: SP 2: P 4.6: RC 1.2: D 3.3. Refers to A. Engh, G. Jeppesen, T. Pettersen, J. J. Stedje, R. L. Stevens.

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(5) MORRISON, HARRY, 1504 Gough St., Baltimore, Md. (Age 27. Born Philadelphia, Pa.) 1923 C. E., Cornell Univ. TT 2: SP 2. June 1923 to May 1924 Asst. Engr., La Romana Sugar Co., Santo Domingo, acting as Transitman and Chf. of Party on railroad investigation and construction. TT 1: SP 0.5: P 0.5. May to Sept 1924 Inspector, M. W. Kellogg Co., Jersey City, N. J., being Sub-Inspector on pipe, City of San Francisco. TT 0.3: SP 0.3. Nov. 1924 to date surveying, real estate development and sales, Wilson Realty Co., Baltimore, Md. TT 2: SP 2. TT 5.3: SP 4.8: P 0.5. Refers to F. A. Barnes, C. L. Walker.

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(7) NELSON, CHARLES JOLMAR, Box 363, Keokuk, Iowa. (Age 45. Born West Point, Nebr.) 1907 B. S. in C. E., Armour Inst. Tech. TT 2: SP 2. July to Dec. 1907 Inspector, Eng. Dept., Illinois Central R. R., on track elevation and bridge work. TT 0.5: P 0.5. April 1908 to May 1909 Inspector, Instrumentman and Draftsman, City of Muskogee, Okla., on storm and sanitary sewer and paving work. TT 1.1: P 1.1. May 1909 to June 1911 Draftsman, Inspector and Instrumentman, Kansas City Southern R. R., on relocation and betterment work. TT 2.1: P 2.1. June to Nov. 1911 Instrumentman, Union Pacific R. R. TT 0.5: P 0.5. Jan. 1912 to March 1913 Inspector and Instrumentman, I. C. R. R., rebuilt freight yard, Louisville, Ky., and new division shops. TT 1.2: P 1.2. April to Dec. 1913 Draftsman, Concrete Steel Products Co., on design of office and warehouse buildings. TT 0.7: P 0.7. April 1914 to April 1915 Supt., Coelitz Constr. Co., on paving construction, Highland Park and Lake Villa, Ill. TT 1: SP 0.5: P 0.5: RC 1. May 1915 to March 1916 Instrumentman, Chicago, Milwaukee & St. Paul Ry. TT 0.9: P 0.9. May 1916 to Sept. 1917 Res. Engr., City of Rock Rapids, Iowa, on asphalt pavement and sewer work. TT 1.3: P 1.3: RC 1.3: D 0.5. Sept. to Dec. 1917 Res. Engr., City of Laurens, Iowa, on asphalt pavement work. TT 0.3: P 0.3: RC 0.3. Jan. 1918 to Sept. 1922 County Engr., Lyon County, Iowa, on design and construction, highway and bridge work. TT 4.8: P 4.8: RC 4.8: D 3. (Sept. 1922 to Jan. 1924 Contr.'s Engr., Empire Cons. Co., construction work, highway and municipal paving, sewer and road work. TT 1.3: P 1.3: RC 1.3. March 1924 to Dec. 1925 Draftsman with L. A. Canfield, Architectural and Structural Engr., on steel and concrete office, store and mill buildings. TT 1.8: P 1.8: D 1.8. Dec. 1925 to date Res. Engr. for Brown & Cook, Engrs., Ottumwa, Iowa, on paving and sewer work at Keokuk, Iowa, (\$750,000 project). TT 1: P 1: RC 1: D 0.5. TT 20.6: SP 2.5: P 18.1: RC 9.7: D 5.8. Refers to L. A. Canfield, C. H. Currie, E. W. Dunn, K. C. Gaynor, C. E. Johnston.

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(2) NELSON, HENNING F, 58 Granite, Bath, Me. (Age 32. Born Ft. Calhoun, Nebr.) 1916 B. Sc. C. E., Univ. of Nebr. TT 2: SP 2. June-Sept. 1916 Inspector on paving with Clark E. Mickey, Lincoln, Nebr. TT 0.3: SP 0.3. Oct. 1916 to Aug. 1917 Asst. to Res. Engr. on concrete bridge construction for Waddell & Son. TT 0.8: P 0.8. Aug. 1917 to May 1919 Lieut., Engrs., U. S. Army, 35th Div. TT 1.8: P 1.8: RC 0.8. July-Sept. 1919 designing and checking construction, Swift Packing Co., Kansas City, Kans. TT 0.2: P 0.2: D 0.2. Oct. 1919-Dec. 1920 Asst. Engr., A. S. Hecker Co., on large concrete viaduct at Kansas City, Mo. TT 1.3: P 1.3: RC 0.5. March 1921-June 1926 Project Engr., Missouri State Highway Comm., in charge of construction of several bridges. TT 5.3: P 5.3: RC 5.3. July 1926 to date Asst. Res. Engr. for J. A. L. Waddell, on Hennebec Bridge, Bath, Me. TT 0.4: P 0.4: RC 0.4. TT 12.1: SP 2.3: P 9.8: RC 7: D 0.2. Refers to C. K. Allen, S. Hardesty, C. E. Mickey, H. P. Mobberly, B. H. Piepmeyer, E. M. Stayton, J. A. L. Waddell.

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(11) NELSON, SAMUEL BALDWIN SMITH, Box 218, Beaumont, Cal. (Age 24. Born Kansas City, Mo.) A. B., Pomona Coll. 1926 C. E., Cornell Univ. TT 2: SP 2. June to Sept. 1922 Rodman, Southern California Edison Co. Sept. 1926 to date Topographic Draftsman, City of Los Angeles, Cal., computations on preliminary survey of Colorado River Aqueduct. TT 0.3: SP 0.3. TT 2.3: SP 2.3. Refers to F. A. Barnes, E. A. Bayley, E. N. Burrows, C. Crandall, F. G. Dessery, H. N. Ogden, J. E. Perry, E. W. Schoder, F. J. Seery, C. L. Walker.

## 176

(12) NIELSEN, JENS EGEDE, 1524 Haro St., Vancouver, B. C., Canada. (Age 35. Born Frederikshavn, Denmark.) 1914 B. S. in C. E., Royal Tech. Coll., Copenhagen, Denmark. TT 2: SP 2. Feb. to July 1914 Civ. Engr. with Augustinus Nielsen, Contr., on transport-railroad construction. TT 0.4: P 0.4: D 0.4. July 1914 to March 1916 Civ. Engr., Metropolitan Tramway Co. (Københavns Sporveje); Designer. TT 1.8: P 1.8: D 1.8. March 1916 to May 1917 and Nov. 1918 to March 1919 member of firm, Nielsen Bros., Archts. and Cons. Engrs., designing reinforced concrete structures. TT 1.5: P 1.5: RC 1.5. May 1917 to Nov. 1918 with Royal Engrs. (Army), and (part of time) Civ. Engr. on hydrometrical investigations, Danish Moor Co., Viborg. TT 1.5: SP 1.2: P 0.3: D 0.3. March 1919 to Jan. 1920 First Asst. Engr., Golding (Denmark) South Rys. TT 0.9: P 0.9: D 0.9. Jan. to June 1920 Civ. Engr., Danish Govt. Rys. (De danske Statsbaner), on design of reinforced concrete structures. TT 0.4: P 0.4: D 0.4. Sept. 1920 to Feb. 1924 on design and execution of reinforced concrete structures, until Aug. 1922 as Civ. Engr. with Arnhold Bros., Shanghai, China, then as Cons. Engr. at Shanghai. TT 3.5: P 3.5: RC 2.5: D 1. March 1924 to date with British Columbia Elec. Ry Co., Ltd., Vancouver, B. C., on design of reinforced concrete and steel structures relating to power plants. TT 2.8: P 2.8: D 2.8. TT 14.8: SP 3.2: P 11.6: RC 4: D 7.6. Refers to C. E. Blee, E. E. Carpenter, J. D. Galloway, S. P. Wing. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

## 177

(4) O'LEARY, JOSEPH THOMAS, 239 Ashdale St., Philadelphia, Pa. (Age 22. Born Philadelphia, Pa.) Completed 3 years of Civ. Eng. course, Drexel Evening School, Philadelphia, Pa. Jan. 1925 to date Structural Draftsman, Dept. of City Transit, Philadelphia, detailing subway and elevated structures and terminal yard house, since April 1926 on drafting and preliminary design for Broad Street Subway. TT 2.1: SP 2.1. Refers to W. T. E. Barber, J. E. Boatrite, J. E. Gill, G. N. Hyland, B. A. Owen.

## 178

(14) PAFRATH, ERNST, 5348 Nottingham Ave., St. Louis, Mo. (Age 40. Born St. Louis, Mo.) Sept. 1905 to Oct. 1906 Rodman, Aurora, DeKalb & Rockford Traction Co., Aurora, Ill. TT 1.1: SP 1.1. Nov. 1906 to Jan. 1907 Instrumentman, Wayne Constr. Co., Bay City, Mich. TT 0.2: SP 0.2. June to Nov. 1907 Bridge Inspector, Dec. 1907 to Sept. 1908 Asst. Bridge Engr. and Oct. 1908 to Aug. 1909 Res. Engr. on design and construction of bridges and culverts, Santa Fe R. R., Belen, N. Mex. TT 2.1: SP 0.4: P 1.7: RC 0.9: D 1.3. Feb. 1910 to date with City of St. Louis, until July 1911 as Inspector, and July 1911 to March 1920 Asst. Civ. Engr., Sewer Dept., on construction; March 1920 to Nov. 1922 Civ. Engr., President's Dept., on construction, of streets and sewers; Nov. 1922 to May 1926 Supt. of Sewers; since May 1926 Asst. Sewer Commr. TT 16.9: P 16.9: RC 11.3: D 6.6. TT 20.3: SP 1.7: P 18.6: RC 12.2: D 7.9. Refers to R. B. Brooks, H. E. Frech, E. R. Kinsey, W. E. Rolfe, C. W. S. Sammelman, C. E. Smith.

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(7) **PARSONS, ELIOT BARBER**, 419 North Washington St., Watertown, Wis. (Age 57. Born Milwaukee, Wis.) 1886 to 1889 Gen. Asst. to R. C. Reinertson, Milwaukee, Wis., surveying, platting land, etc. *TT 3: SP 3.* 1889 to 1892 Instrumentman, surveying lands for allotment to Indians, Oneida (Wis.) Reservation. *TT 3: SP 3.* 1892 to 1893 Asst. to City Engr., and 1893 to 1896 and 1897 to 1904 City Engr., Fond du Lac, Wis. *TT 11: SP 1: P 10: RC 10: D 10.* 1896 to 1897 student, special course, Univ. of Wisconsin. 1904 to 1908 City Engr., Watertown, Wis. *TT 4: P 4: RC 4: D 4.* 1908 to date Municipal and Cons. Engr. for Beaver Dam, Waupun, Horicon, Reeseville, Ft. Atkinson, Jefferson, Evansville, Columbus, Tomahawk, Kilbourn, Oconomowoc, Clinton, Clintonville, Waunakee, Randolph, Juneau, Augusta, etc., in Wisconsin. *TT 18: P 18: RC 18.* *TT 39: SP 7: P 32: RC 32: D 32.* Refers to C. M. Briggs, A. W. Dilling, W. M. Smith, J. L. Southworth, M. W. Torkelson, N. K. Wilson.

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(7) **PETERS, SIMON CAMERON**, 604 Mayer Bldg., Milwaukee, Wis. (Age 38. Born Middletown, Pa.) 1912 C. E., Lehigh Univ. *TT 2: SP 2.* Sept. 1906 to Aug. 1907 and June to Aug. of years 1908-1911 Chainman, Pennsylvania R. R. Co. *TT 0.9: SP 0.9.* July 1912 to Dec. 1915 Civ. Engr., Milwaukee Coke & Gas Co. *TT 3.4: P 3.4: RC 2: D 2.* Dec. 1915 to July 1919 Engr., The Newport Co., Carrollville, Wis., in charge of construction of buildings (about 35), sewers, power house, 30-in. water supply 3 000 feet into Lake Michigan, etc. *TT 3.6: P 3.6: RC 3.6: D 3.6.* July 1919 to Oct. 1922 Engr., in charge of construction of two batteries of Koppers Co. by-product coke ovens (100 ovens complete), coal- and coke-handling, conveying machinery, etc. *TT 3.2: P 3.2: RC 3.2: D 3.2.* Oct. 1922 to date Chf. Engr., The Edward E. Gillen Co., marine engineering and contracting; State St. Bridge, Milwaukee, and two concrete caisson breakwaters (1 700 and 2 430 ft. long) at present under construction, docks, revetments and rubblemount breakwaters at Milwaukee and Racine, Wis. *TT 4.2: P 4.2: RC 4.2: D 4.2.* *TT 17.3: SP 2.9: P 14.4: RC 13: D 13.* Refers to A. C. Bell, G. F. Daggett, R. W. Gamble, C. U. Smith, H. Y. Smith, N. K. Wilson.

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(1) **PETERSEN, ALF**, 200 Clinton Ave., Jersey City, N. J. (Age 29. Born Oslo, Norway.) 1923 C. E., National Inst. Tech., Trondhjem, Norway. *TT 2: SP 2.* 1st Lieut., Norwegian Army Engrs. July 1918 to July 1919 with Norwegian Army, being Chf. of Party, surveying, topography. *TT 1: SP 0.3: P 0.7: RC 0.7.* July to Sept. 1921 and Sept. to Nov. 1922 Estimator and on mathematical calculation of triangulation, with L. Fjellanger, Trondhjem, Norway. July to Sept. 1923 Draftsman with H. Furulund, Oslo, Norway, on structural steel for brick factory. *TT 0.1: P 0.1.* Dec. 1923 to Feb. 1924 Draftsman and Asst. to Supt. of Constr., West Penn Power Co., Connellsville, Pa., office work and structural steel, drafting. *TT 0.2: P 0.2.* Feb. to June 1924 Draftsman, Pressed Steel Car. Co., McKees Rocks, Pa., on passenger-car construction. *TT 0.3: P 0.3.* June to July 1924 Draftsman and Estimator, Altoona (Pa.) Pipe & Steel Supply Co., structural steel work for buildings. *TT 0.1: P 0.1: RC 0.1.* Aug. to Dec. 1924 Draftsman, Robins Conveying Belt Co., New York City, conveyors and general structural steel. *TT 0.3: P 0.3.* Jan. 1925 to Aug. 1926 Draftsman and Designer, Central R. R. Co. of New Jersey, Jersey City, N. J., bridge designing. *TT 1.6: P 1.6: D 1.6.* Aug. 1926 to date Bridge Designer, New Jersey State Highway Dept., Jersey City. *TT 0.4: P 0.4: D 0.4.* *TT 6: SP 2.3: P 3.7: RC 0.8: D 2.* Refers to A. H. Dakin, S. Johannesson, L. R. Shellenberger, O. Singstad, H. E. Van Ness, J. J. Yates.

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(11) **PHILLIPS, ELMER LEROY**, 361 West Acacia St., Glendale, Cal. (Age 31. Born Santa Ana, Cal.) Feb. 1918 to June 1919 Draftsman, U. S. Navy, Naval Air Station, San Diego, Cal., on plans, maps and charts. *TT 1.3: SP 1.3.* Oct. 1919 to date with San. Sewer Div., City Engr.'s office, Los Angeles, Cal., until Oct. 1920 as Draftsman on plans and profiles, Oct. 1920 to Oct. 1923 Jun. Civ. Engr., designing and checking sewer plans, Oct. 1923 to Oct. 1924 Asst. Civ. Engr., in charge of work on sewer design, and since Oct. 1924 Prin. Asst. Engr. in charge of all routine work and administration. *TT 7.2: SP 4: P 3.2: D 3.* *TT 8.5: SP 5.3: P 3.2: RC 3.2: D 3.* Refers to E. R. Bowen, W. H. Collins, H. P. Cortelyou, W. T. Knowlton, R. W. Stewart.

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(1) **PLATT, HOWARD CHARLES**, 149 Broadway, New York City. (Age 26. Born New York City.) Student, Stevens Inst. (1 year) and Brooklyn Polytechnic Inst. (2½ years). *TT 1: SP 1.* May to Sept. 1924 Rodman, Delaware, Lackawanna & Western R. R., ran instruments. *TT 0.4: SP 0.3: P 0.1.* Sept. 1924 to July 1926 Instrumentman, Hudson County Eng. Dept., line and grade work and checking concrete and steel in bridge. *TT 1.8: P 1.8.* July 1926 to date Res. Engr., at Portchester, N. Y., also Gen. Asst. to Henry W. Taylor, New

York City, has charge of dam being built in Port Chester, and (occasionally) of other work. *TT 0.5; P 0.5; RC 0.4; D 0.1. TT 3.7; SP 1.3; P 2.4; RC 0.4; D 0.1.* Refers to A. B. Cohen, J. M. Farley, H. P. Hammond, E. J. Squire, R. L. H. Tate.

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(11) **POMEROY, HUGH REYNOLDS**, Hall of Records, Los Angeles, Cal. (Age 27. Born Burbank, Cal.) June 1923 to date with Board of Supervisors of Los Angeles County, being Secy. and Member, Los Angeles County Regional Planning Comm.; on preparation and execution of comprehensive regional plans of Los Angeles County, including streets and highways, parks and parkways, zoning, etc., and of town plans for communities in the county; planning administration, educational and publicity work. *TT 3.5; P 3.5; RC 3.5.* Refers to F. Bates, C. K. Bowen, H. T. Cory, E. E. East, A. Jones, G. W. Jones, A. K. Warren.

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(10) **POU, FRANK EUGENE STANTON**, 1602 Oxmoor Road, Edgewood, Ala. (Age 24. Born Rock Run, Ala.) Student, Birmingham Southern Coll. (1922 to 1923) and Alabama Polytechnic Inst. (1923 to 1924). July 1924 to June 1925 Street Inspector, City of Birmingham, Ala., on concrete curbs, gutters, sidewalks, streets, culverts, bridges, asphalt paving, sewers, brick work, etc. *TT 0.9.* Aug 1925 to date Draftsman, State Highway Dept. of Alabama, Second Div., plans and preliminary estimates. *TT 1.5; D 1.5. TT 2.4; D 1.5.* Refers to C. A. Baughman, W. P. Butler, J. A. C. Callan, W. C. West, W. G. White.

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(9) **PRINZ, ROBERT BIESER**, 425 South Jackson St., Dayton, Ohio. (Age 26. Born Dayton, Ohio.) 1922 B. C. E., Ohio State Univ. 1924 M. S., Mass. Inst. Tech. *TT 2; SP 2.* June to Sept. of years 1916 and 1917 Rodman with Cellarius & Dressler, Dayton, Ohio, on surveys, drafting, etc. June to Aug. 1920 Transitman and Chf. of Party on surveys, with Knight, Qualle & Gampier, Akron, Ohio. Aug. to Sept. 1920 Transitman, Financial Appraisal Co., Dayton, being Chf. of field party on appraisal survey of Dayton & Western Traction Co. July to Sept. 1921 Inspector, Eng. Dept., Dayton, on construction of reinforced concrete canal bridge. June to Oct. 1922 Draftsman with Schenck & Williams, Archts., Dayton, on structural drawings and details. *TT 0.3; SP 0.3.* Oct. 1922 to Jan. 1924 graduate student, Massachusetts Inst. of Technology. *TT 1.2; P 1.2.* Jan. 1924 to Jan. 1925 Jun., Engr., Hugh L. Cooper & Co., New York City, being Inspector on foundation testing and concrete work, making structural drawings and details, Wilson Dam, Florence, Ala. *TT 1; SP 1.* Jan. 1925 to date Asst. Engr., Div. of Water, Dayton, in charge of Eng. Dept., and of field work, drafting, engineering and inspection on construction work, designing. *TT 2; P 2; RC 1.6; D 0.4. TT 6.5; SP 3.3; P 3.2; RC 1.6; D 0.4.* Refers to C. S. Bennett, F. J. Cellarius, C. H. Elffert, J. F. Hale, W. W. Morehouse, C. H. Paul, J. R. Shank.

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(1) **QUADE, MAURICE NORTHROP**, 217 North Seventh St., Newark, N. J. (Age 26. Born Kewanee, Ill.) 1925 B. S. in Civ. Eng., Univ. of Ill. *TT 2; SP 2.* June to Sept. 1923 Transitman and Draftsman, Big Creek Coals, Inc., Harrisburg, Ill., surveys, etc. June to Sept. 1924 Transitman, Delaware, Lackwanna & Western R. R. June to Sept. 1925 Draftsman, Illinois Central R. R. *TT 0.3; SP 0.3.* Sept. 1925 to June 1926 post-graduate student in Civ. Eng. Univ. of Illinois. *TT 0.8; P 0.8.* July 1926 to date Draftsman, office of J. A. L. Waddell, Cons. Engr., New York City, detailing and checking designs of steel bridges. *TT 0.5; P 0.5. TT 3.6; SP 2.3; P 1.3.* Refers to H. Cross, S. Hardesty, M. S. Ketchum, T. C. Shedd, J. A. L. Waddell, C. C. Williams.

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(7) **RAWN, WILLIAM PETER**, 603 North Second Ave., Washington, Iowa. (Age 38. Born Storm Lake, Iowa.) Prof. Engr. and Land Surveyor, State of Iowa. 1910 B. E. and 1914 C. E., State Univ. of Iowa. *TT 2; SP 2.* June 1910 to Feb. 1913 Engr. in charge of construction for Hall & Adams, Centerville, Iowa, paving, sewers and purification plants, and coal-mine surveys. *TT 2.7; SP 1.7; P 1; RC 2.7.* March to May 1913 with U. S. Govt. at Dubuque, Iowa, as Asst. Engr. on construction, wing dams and shore protection, Mississippi River. *TT 0.2; SP 0.2.* May to June 1913 Asst. Engr., City of Rock Island, Ill., on water mains, sheet asphalt paving and mine surveys. *TT 0.1; SP 0.1.* June 1913 to date County Engr., Washington County, Iowa, City Engr., Washington, Iowa, Cons. Engr., Sigourney, Iowa, and (part of time 1921-1926) Chf. of Party and Res. Engr., Iowa State Highway Comm., on road work, bridge design and construction; also in private practice, Kalona and Skunk River Drainage Dist., Washington County; land surveys and court cases; design of 1 000 000-gal. reinforced concrete reservoir and sewage-disposal plant for City of Washington and of sewage-disposal plant for Washington County Home. *TT 13.5; P 13.5; RC 10; D 3.5. TT 18.4; SP 3.9; P 14.5; RC 12.6; D 3.5.* Refers to R. W. Crum, B. J. Lambert, A. Marston, E. L. Waterman, F. R. White, S. M. Woodward, C. H. Young.

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(4) **RIHL, WALTER ALDAY**, 2348 East Norris St., Philadelphia, Pa. (Age 23. Born Philadelphia, Pa.) 1925 B. S. in C. E., Towne Sci. School, Univ. of Pa. TT 2: SP 2. June 1925 to Feb. 1926 Jun. Engr., Mountain Water Supply Co., Greensburg, Pa., drafting, instrument work, estimates of construction costs, preliminary designs, office work. TT 0.7: SP 0.7. Feb. 1926 to date Engr., member of firm, John A. Rihl, Philadelphia, Pa., special machinery for food industries, rebuilt part of shop with steel and concrete, made series of experiments and at present on final design of new machine. TT 0.8: P 0.8. TT 3.5: SP 2.7: P 0.8. Refers to W. H. Barton, W. H. Chorlton, H. G. Leng, W. S. Pardoe, J. A. Russell.

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(14) **SAILER, ROBERT**, 4208 Campbell, Kansas City, Mo. (Age 26. Born Rorschach, Switzerland.) 1924 C. E., Federal Inst. for Tech. Sci., Zurich, Switzerland. TT 2: SP 2. March 1924 to Oct. 1925 Draftsman, Designer and Estimator, Phoenix Bridge Co., Phoenixville, Pa. TT 1.5: SP 0.8: P 0.7: D 0.7. Oct. 1925 to date Draftsman and Bridge Designer with Harrington, Howard & Ash, Cons. Engrs., Kansas City, Mo. TT 1.2: SP 0.1: P 1.1: RC 1.1: D 1.1. TT 4.7: SP 2.9: P 1.8: RC 1.1: D 1.8. Refers to L. R. Ash, S. Gowen, C. S. Harper, E. E. Howard, J. R. Lambert, C. W. MacCornack, H. C. Tammen.

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(2) **SAMAHA, NICHOLAS ROSSELLER**, 265 Shawmut Ave., Boston, Mass. (Age 23. Born Kfaour, Syria.) 1926 S. B., Mass. Inst. Tech. TT 2: SP 2. Refers to E. Mirabelli, C. H. Sutherland.

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(9) **SANDERSON, THEODORE HAROLD**, 1005 Salem Ave., Dayton, Ohio. (Age 22. Born Harrisburg, Pa.) 1925 B. E., Johns Hopkins Univ. TT 2: SP 2. July to Oct. of years 1923 and 1924 Office Asst., Roland Park Co., Eng. Dept., Baltimore, Md., on topographical maps, road and sewer plans, etc. June 1925 to Aug. 1926 Chainman and Rodman, and Aug. 1926 to date Asst. Engr., Baltimore & Ohio R. R., M. of W. Dept. TT 1.7: SP 1.7. TT 3.7: SP 3.7. Refers to T. Bloecher, Jr., T. F. Comber, J. H. Gregory, G. W. Stephens, Jr., E. Stimson, J. T. Thompson.

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(1) **SAUERBRUN, IRVING NELSON**, 704 Westfield Ave., Elizabeth, N. J. (Age 22. Born Elizabeth, N. J.) 1926 C. E., Lehigh Univ. TT 2: SP 2. June to Sept. 1925 Rodman, and Draftsman, on maps, profiles, etc., and July 1926 to date Jun. Engr. and Inspector on construction of Holland Tunnel Approach, New Jersey State Highway Comm. TT 0.4: SP 0.4. TT 2.4: SP 2.4. Refers to R. J. Fogg, M. O. Fuller, H. G. Payrow, L. R. Shellenberger, W. L. Wilson.

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(7) **SCHNITZ, JACK LEWIS**, Care, Commonwealth Power Corporation, Jackson, Mich. (Age 29. Born Chicago, Ill.) 1918 B. S. E. (Civ.) Univ. of Mich. TT 2: SP 2. Feb. 1916 to 1918 (while student) Draftsman, Transitman and Chf. of Party with Prof. H. H. Atwell, Ann Arbor, Mich., on surveys, subdivision, buildings, etc., and (after June 1917) Draftsman and Asst. to Production Mgr., Globe Motor Truck Co., Northville, Mich., on design and detail of stress carrying parts of truck chassis. June to Sept. 1918 Asst. Hydr. Engr. with Robt. E. Horton, Cons. Hydr. Engr., Albany, N. Y., on hydraulic computations, turbine testing, stream flow and investigations. TT 0.2: P 0.2. Sept. 1918 to Jan. 1919 2d Lieut., Coast (Heavy) Artillery Corps, student, Officers' School, Fortress Monroe, Va.; Orientation Officer. TT 0.3: P 0.3. March 1919 to March 1920 Associate Editor, *Concrete*, Detroit, Mich., in charge of drafting, Technical Dept., and Cement Hill Sec. of publication; visited and described large concrete construction works, studied manufacture of cement, lime, gypsum, etc. TT 1: P 1: RC 1. March to Dec. 1920 in private practice with J. H. Holub, Akron, Ohio, field engineering for architects and contractors, surveys, etc. TT 0.8: P 0.8: RC 0.4: D 0.4. Jan. to May 1921 Asst. to Engr., Land & Industrial Dept., Chicago, Burlington & Quincy R. R., Chicago, maps, computations, etc. TT 0.4: P 0.4. Aug. to Nov. 1921 Engr., Land Appraisal Dept., Chicago, Milwaukee & St. Paul R. R., Chicago, prepared descriptions, plats, etc., for leasing property. TT 0.2: P 0.2. Nov. 1921 to June 1922 Designer and Asst. to Hydr. Engr., United Light & Power System, Abilene, Kans., designed and detailed hydro-plant construction, including new forebay, spillway, penstock and tunnel (under steam turbine); designed new hydro plant; construction supervision. TT 0.6: P 0.6: RC 0.6. June 1922 to date Designing Draftsman and later Asst. Civ. and Hydr. Engr., Consumers Power Co. and Commonwealth Power Corporation, designed hydraulic structures, construction equipment, substation buildings, garages, warehouses, etc.; hydraulic studies and computations, prepared specifications, supervised construction, estimates, etc.; Acting Head of Civ. and Hydr. Eng. Dept., of the

Corporation (1½ years) and in charge of drafting room (1½ years). *TT 4.5: P 4.5: RC 3: D 1.5. TT 4.0: SP 2: P 8: RC 5: D 1.9.* Refers to E. M. Burd, R. E. Horton, F. B. Kiel, H. W. King, E. Maerker, H. E. Riggs, W. W. Tefft.

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(1) **SCHUSTER, KARL RUDOLPH**, 154 Nassau St., New York City. (Age 48. Born Dresden, Germany.) 1903 Master (Capt.) of Merchant Marine, School of Navigation, Hamburg, Germany. Took courses in Marine Architecture, Mech. and Civ. Eng. July 1901 to July 1906 Officer in charge of watch and navigation of Trans-Atlantic Liners of Hamburg-American Line. *TT 5: P 5: RC 5.* July 1906 to Dec. 1907 Asst. Supt. and Engr., Faber Constr. Co. of Berlin, Germany and New York City. *TT 1.5: P 1.5: RC 1: D 0.5.* Dec. 1907 to Dec. 1908 Concrete Bridge Inspector and Acting Res. Engr., Canadian Northern Quebec Ry., designing, laying out and inspecting concrete bridge, piers and foundations. *TT 1: P 1: RC 0.5: D 0.5.* Dec. 1908 to Feb. 1911 Engr., Bldg. Improvement Co. of New York, designing and superintending reinforced concrete and structural steel buildings. *TT 2.2: P 2.2: RC 1: D 1.2.* Feb. 1911 to May 1912 Engr., National Fireproofing Co. of New York, in charge of designing and estimating reinforced concrete buildings, etc. *TT 1.2: P 1.2: D 1.2.* May 1912 to date in private practice as Cons. Engr.; May 1912 to May 1914 also Engr. and Supt., Custodis Chimney Con. Co., Concrete & Foundation Co., and Bartram Bros., New York City. *TT 14.6: P 14.6: RC 7: D 7.6. TT 25.6: P 25.6: RC 14.5: D 11.1.* Refers to T. S. Clark, E. H. Harder, A. Hardoncourt, W. Mueser, E. Wegmann.

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(7) **SHERZER, ALLEN FIRMAN**, 1213 Ferdon Road, Ann Arbor, Mich. (Age 36. Born Houghton, Mich.) 1913 B. M. E., Univ. of Mich. *TT 2: SP 2.* July 1913 to Feb. 1914 drafting and surveying, Union Carbide Co., Sault Ste. Marie, Mich. *TT 0.6: SP 0.6.* Feb. to Oct. 1914 Constr. Supt. on transmission line, Chippewa Edison Co., Sault Ste. Marie, Mich. *TT 0.7: SP 0.7.* Oct. 1914 to July 1916 Teaching Asst., Univ. of Michigan, had charge of laboratory work in hydraulic machinery. *TT 1.7: SP 1.7.* July to Nov. 1916 hydro-electric construction and surveys, Wanapitac, Ontario, Canada, being Asst. to Res. Engr. *TT 0.3: SP 0.3.* Nov. 1916 to Feb. 1917 Designer, Union Carbide Co., Niagara Falls, N. Y., structural and hydraulic drafting and design. *TT 0.3: SP 0.3.* Feb. to Sept. 1917 and March 1919 to May 1920 in charge of centrifugal pump design, Kingsford Foundry & Machine Works, Oswego, N. Y. *TT 1.8: P 1.8: RC 1.8: D 1.8.* Sept. 1917 to Feb. 1919 1st Lieut., Field Artillery, U. S. Army, Orientation Officer, 1st Bn., 301st Field Artillery, A. E. F. *TT 1.4: SP 0.3: P 1.1: RC 1.1.* May 1920 to date Asst. and Associate Prof. of Mech. Eng., Univ. of Michigan; also Cons. Hydro Mech. Engr. on pump development and design. *TT 6.7: P 6.7: RC 6.7: D 6.7. TT 15.5: SP 5.9: P 9.6: RC 9.6: D 8.5.* Refers to J. H. Cissel, M. E. Cooley, A. J. Decker, L. M. Gram, W. C. Hoad, C. O. Wisler.

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(9) **SIMPSON, ROBERT HARRIS**, 1748 Summit St., Columbus, Ohio. (Age 53. Born Cliford, Pa.) 1896 C. E., Cornell Univ. *TT 2: SP 2.* Sept. 1896 to June 1904 with Cleveland, Cincinnati, Chicago & St. Louis R. R. Co., until Dec. 1898 as Rodman, Instrumentman and Inspector, from Dec. 1898 to Jan. 1900 Res. Engr. in charge of construction of Union Station, Dayton, Ohio; Jan. 1900 to Sept. 1903 Div. Engr. in general charge of construction and maintenance of track and structures, and after Sept. 1903 in general charge of surveys and estimates of cost for reduction of grades and changes in alignment. *TT 7.9: SP 2.3: P 5.6: RC 5.6.* June 1904 to date with City of Columbus, Ohio, until April 1906 on office and field work; April 1906 to Sept. 1920 Engr. in charge of plans and estimates and supervision of construction of grade crossing elimination projects and (after Jan. 1917) of plans and supervision of construction of Scioto River Channel Improvement for flood relief (\$3 500 000); since Sept. 1920 Chf. Engr., Dept. of Public Service, in general charge of design, construction and maintenance of paving, sewers and structures. *TT 22.5: P 22.5: RC 20.7: D 20.7. TT 32.4: SP 4.3: P 28.1: RC 26.3: D 20.7.* Refers to E. G. Bradbury, W. H. Dittoe, J. H. Gregory, F. W. Jennings, E. A. Kemmler, C. T. Morris, G. F. Schlesinger.

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(1) **SMITH, FERDINAND OTTO**, 626 West 136th St., New York City. (Age 26. Born Sioux Falls, S. Dak.) 1924 B. S. in C. E., Carnegie Tech. *TT 2: SP 2.* June 1924 to Aug. 1925 Inspector of reinforced concrete culvert pipe plant, South Dakota Highway Comm. *TT 1.2: P 1.2: RC 1.2.* Sept. 1925 to July 1926 on design of steel catenary bridges for Gibbs & Hill, Inc., New York City. *TT 0.7: SP 0.7.* July 1926 to date on design of concrete, pipe layout, building plans, The Texas Co., New York City. *TT 0.5: SP 0.5. TT 4.4: SP 3.2: P 1.2: RC 1.2.* Refers to J. M. Brown, W. S. Foster.

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(1) **SMITH, JOHN KENYON**, 33 Thormond Ave., Hicksville, N. Y. (Age 32. Born North Adams, Mass.) 1913 to 1916 Student, Virginia Military Inst. *TT 1: SP 1.* 1916 to 1919

Sales Engr., Smith Courtney Co., Richmond, Va., material estimates for equipment and supplies for railway, mines, cities, towns, contractors, etc. TT 3.2: P 3.2. 1919 to 1920 in complete charge of remodeling Basic (Va.) Shops, installation of power plant, machinery, etc., supervision of construction, etc. TT 1: P 1: RC 1. 1920 to 1924 under J. T. McPeak, Lynbrook, N. Y., as Asst. Engr. on highway construction on Long Island, reinforced concrete highway and drainage work, full charge of construction according to plans, and of field work and responsible for changes to meet field conditions. TT 3.7: P 3.7: RC 3.7. 1924 to 1925 Contr.'s Engr., Tromac Corporation, reinforced concrete construction, in charge field work, construction and estimates, small highway bridges, storm drain construction, highway, etc. TT 0.6: P 0.6: RC 0.6. 1925 to date Jun. Engr., Board of Transportation, New York City, field work and construction, also estimates on open cut and tunnel, subway work. TT 2: P 2: RC 0.5. TT 11.4: SP 1: P 10.4: RC 5.7. Refers to J. A. Anderson, C. E. Conover, W. C. Merryman, J. R. Monaghan, R. Ridgway, C. D. Searle.

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(5) SMITH, WILLIAM WARE, 2112 Rose Ave., Richmond, Va. (Age 21. Born Richmond, Va.) 1926 B. S. in Civ. Eng., Va. Mil. Inst. TT 2: SP 2. July 1926 to date Draftsman, Bridge Dept., Virginia State Highway Comm., on plans for bridges. TT 0.5: SP 0.5, TT 2.5: SP 2.5. Refers to J. A. Anderson, A. H. Bell, T. Ellett, W. R. Glidden, B. P. Harrison, H. G. Shirley.

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(8) SMITH, WILSON GOODRIDGE, 1400 East 53d St., Chicago, Ill. (Age 23. Born Portland, Me.) 1925 B. S. in C. E., Harvard Eng. School. TT 2: SP 2. July 1925 to date Jun. Engr., San. Dist. of Chicago, drafting, records, minor design and plant operation. TT 1.5: P 1.5: D 0.2. TT 3.5: SP 2: P 1.5: D 0.2. Refers to L. J. Johnson, H. L. McMillan, L. Pearse, E. L. Pflanz, G. F. Swain.

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(13) SOLOMON, GERTRUDE SPENCER, 2633 Benvenue Ave., Berkeley, Cal. (Age 41. Born Canterbury, England.) 4 years student, Queens Coll., Wimbledon, England. Aug. 1917 to Jan. 1918 Draftsman, Hercules Powder Works, Contra Costa County, Cal. TT 0.5: P 0.5. Feb. 1918 to July 1922 with U. S. Govt. as follows: Feb. to Sept. 1918 Topographical Draftsman, U. S. Engrs., Ninth Corps Area, San Francisco, Cal.; Sept. 1918 to Dec. 1919 Draftsman, Q. M. Corps, in France, with Chf. Statistician on maps and charts, and (after July 1919) with War Dept., Washington, D. C.; Dec. 1919 to Nov. 1921 and Jan. to July 1922 Topographical Draftsman, Bureau of Public Roads, Portland, Ore., and San Francisco. TT 4.5: P 4.5. Aug. 1922 to Dec. 1923 Draftsman, Interstate Commerce Comm., Oakland, Cal., Wood, Sessions & Woolsey Co. TT 1.4: P 1.4. Jan. to June 1924 Highway Draftsman, California State Highway, Willets, Cal. TT 0.5: P 0.5. Sept. 1924 to 1925 Topographical Draftsman, U. S. Engrs., Second Dist., Sacramento and San Joaquin Rivers, San Francisco. TT 0.6: P 0.6. March 1926 to date Topographical and Mechanical Draftsman, U. S. Dept. of Agriculture, Berkeley, Cal. TT 0.7: P 0.7. TT 8.2: P 8.2. Refers to C. Andersen, W. M. Coffey, R. L. Egenhoff, J. A. Elliott, S. Fortier, U. S. Grant, 3d, H. B. Hammill, F. C. Scobey.

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(12) STEVENS, GEORGE, 1714 Colby Ave., Everett, Wash. (Age 23. Born Fertile, Iowa.) 1926 B. S. in C. E., Univ. of Wash. TT 2: SP 2. Refers to W. F. Allison, I. L. Collier, J. B. Hamilton, C. W. Harris, C. C. More.

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(9) STEWART, FRANKLIN DEAN, State Dept. of Health, Columbus, Ohio. (Age 38. Born Hamilton, Ohio.) 1913 C. E., Ohio State Univ. TT 2: SP 2. June 1913 to Dec. 1917 Asst. Engr. to A. Elliott Kimberly, Cons. San. Engr., Columbus, Ohio, on design and in charge of construction of sewerage, sewage-treatment plants, water supply, including distributing systems, wells and pumping-stations. TT 4.5: SP 1: P 3.5: RC 1.5: D 2. Dec. 1917 to date Asst. Engr., Ohio State Dept. of Health, since July 1926 being Prin. Asst. Engr., review of plans for water supply and sewerage, stream-pollution studies, industrial-wastes surveys, sanitation. TT 9: P 9: RC 9. TT 13.5: SP 1: P 12.5: RC 10.5: D 2. Refers to E. G. Bradbury, W. H. Dittos, G. B. Gascoigne, A. G. Husted, W. H. Knox, R. F. MacDowell, F. H. Waring.

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(13) STOUT, OSCAR VAN PELT, Box 180, Berkeley, Cal. (Age 61. Born near Jerseyville, Ill.) 1888 B. C. E., and 1897 C. E., Univ. of Nebr. TT 2: SP 2. July 1886 to March 1887 Chainman and Rodman, Union Pacific R. R., ran instrument and had charge of small parties. TT 0.7: SP 0.7. April to Nov. 1887 Rodman and Transitman, Pacific R. R. (now Missouri Pacific). TT 0.4: SP 0.4. July 1888 to Jan. 1889 Inspector on sewer construction, later Instrumentman and Asst. to City Engr., Beatrice, Nebr., chiefly sanitary sewers and brick

paving. *TT 0.6: SP 0.6.* Feb. and March 1889 Asst. to Div. Engr. on construction, B. & M. R. R. R. in Nebraska (Chicago, Burlington & Quincy), timekeeping, instrument work and earthwork computations. *TT 0.2: SP 0.2.* April 1889 to May 1890 Rodman, Asst. Engr. and Acting Div. Engr., Wyoming Div., Union Pacific R. R., maintenance of way. *TT 1.1: SP 0.9: P 0.2: RC 0.2.* June 1890 to Aug. 1891 City Engr. of Beatrice, sanitary and storm sewers, water-works extensions and improvements, street grades and brick paving. *TT 1.3: P 1.3: RC 1.3: D 1.3.* Sept. 1891 to May 1920 Instructor, etc., to Prof. of Civ. Eng., Univ. of Nebraska, after 1893 in charge of Dept., and after 1912 Dean, Coll. of Eng., also 1894 to (about) 1904 Res. Hydrographer, U. S. Geological Survey, stream measurements, etc.; 1898 to 1912 Agt. and Expert, etc., Irrigation Investigations (and Irrigation and Drainage Investigations), U. S. Dept. of Agriculture; July 1898 to Nov. 1899 Engr., Ingold Placer Min. Co., hydraulic works for placer mining in Colorado; July 1906 to Nov. 1907 Cons. Engr., Tri-State Land Co., Scottsbluff, Nebr., irrigation design and construction, responsible chiefly for structures, including needle dam (navigation type) across North Platte River; July 1908 to Feb. 1911 Chf. Engr., Costilla Estates Development Co., Colorado Springs, Colo., design and construction of works to irrigate 50 000 acres in San Luis Valley, including Sanchez Dam (earth, 110 ft. high); Dec. 1917 to Feb. 1919 Major Engrs., U. S. Army, 2 months in training camp, 4 months with Constr. Div., and 7 months with troops as Battalion Commander. *TT 28.7: P 28.7: RC 28.7: D 28.7.* Aug. 1922 to date Agt.-Asst., Div. of Agricultural Eng., Bureau of Public Roads, U. S. Dept. of Agriculture, Irrigation investigations conducted in co-operation with California Agricultural Experiment Station and California State Dept. of Public Works. *TT 4.3: P 4.3: RC 4.3.* *TT 39.3: SP 4.3: P 34.5: RC 34.5: D 30.* Refers to F. Adams, H. L. Bowlby, P. L. Brockway, G. L. Campen, H. R. Edwards, S. Fortier, W. Grant, J. L. Hershey, A. Marston, E. Mead, C. E. Mickey, F. H. Newell, O. T. Reedy, C. R. Richards, C. Rohwer, J. A. Sargent, F. C. Scobey, J. C. Stevens, R. N. Towl, W. D. Waltman, N. Ware.

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(1) **STROLLO, JAMES**, Brent Good Bldg., Long Branch, N. J. (Age 42. Born Long Branch, N. J.) 1913 Rens. Pol. Inst. June 1913 to June 1914 Asst. Engr. of Constr., New York & Long Branch R. R., on steel viaduct and wooden trestle bridge, also Draftsman. *TT 1: SP 0.5: P 0.5: RC 0.2.* June 1914 to May 1915 Jun. Engr., Routes 4 and 38, Sec. 6A, Times Sq. Subway, and Inspector on reconstruction of Steinway Tunnel, Public Service Comm., First Dist., New York City. *TT 1: P 1.* May to Oct. 1915 Constr. Engr., Crucible Steel Co. of America, on steel mill building construction, Harrison, N. J. *TT 0.5: P 0.5.* Oct. 1915 to April 1916 Draftsman and Computer, Valuation Dept., Philadelphia & Reading Ry., Philadelphia, Pa. *TT 0.5: P 0.5.* May 1916 to April 1918 Draftsman, Abstractor and Chf. of Party, Baltimore & Ohio R. R. and Baltimore & Ohio South Western R. R., at Baltimore and Relay, Md., Wheeling, W. Va., and Cincinnati, Ohio. *TT 2: P 2: RC 1.* April 1918 to July 1920 Asst. Engr., Public Utility Comm., New Jersey, Div. of Bridges and Grade Crossings, designing and Inspector of Construction on highway bridges, reinforced concrete and steel, Newark, N. J. *TT 2: P 2: D 1.* July 1920 to April 1921 Superv. Engr., Monmouth County Board of Freeholders on Patten Point Timber Highway Bridge over Shrewsbury River, Long Branch, and reconstruction of steel drawbridge at Sea Bright, N. J., over Shrewsbury River. *TT 2: P 2.* April 1921 to date in private practice, being Engr. for Boroughs of Sea Bright, Monmouth Beach, West Long Branch, Deal and Allenhurst, and City of Long Branch; designed and supervised construction of 8-in. reinforced concrete pavement, Deal, Allenhurst, Monmouth Beach and Long Branch (total \$194 000), stone break-water jetties, Monmouth Beach, Allenhurst and Long Branch (total \$315 000), two wooden jetties, Deal (\$14 800), sewer lift on Atlantic Ave., Long Branch (\$8 000), 24-in. T. C. surface drain system, Deal (\$30 000) and Monmouth Beach (\$12 000), 8-in sewers, Long Branch (\$3 000) and Deal (\$2 000); designed and supervised installation of automatic street lighting system for Monmouth Beach (\$30 000); plans, specifications and supervision of sidewalk and curbing construction for four boroughs and City of Long Branch (total \$35 000); Advisory Engr. for Prince Constr. Co., Oakland, Cal., Bldrs. of Board Motor Speedways; also on development work; laying out estates, hotel tract, manors, etc. in New Jersey. *TT 5: P 5: RC 5: D 5.* *TT 14: SP 0.5: P 13.5: RC 6.2: D 6.* Refers to V. Gellineau, M. R. Pugh, C. W. Stanford, J. L. Vogel, G. L. Watson.

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(2) **SUN, ARTHUR KWANG-I**, P. O. Box 2498, Boston, Mass. (Age 26. Born Tientsin, China.) 1926 S. B., Mass. Inst. Tech. *TT 2: SP 2.* Nov. 1926 to date Surveyor and Draftsman, Massachusetts Metropolitan Dist. Water Comm. *TT 0.2: P 0.2: D 0.2.* *TT 2.2: SP 2: P 0.2: D 0.2.* Refers to J. B. Babcock, 3d, C. B. Breed, J. R. Freeman, G. L. Hosmer, J. W. Howard, C. M. Spofford, R. G. Tyler.

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(13) THOMPSON, MURRAY NIXON, 2430 Jackson St., San Francisco, Cal. (Age 38. Born in Randolph County, Ill.) Aug. 1907 to Oct. 1913 Chainman, Rodman, Instrumentman, etc., Alaskan Boundary Survey, Milwaukee, Northern Pacific, Oregon-Washington R. R. & Navigation Co., Washington Water Power Co., etc. TT 6.1: SP 2: P 4.1. Oct. 1913 to April 1914 instrument and office work, Imperial Irrigation Dist., El Centro, Cal. TT 0.6: P 0.6. April 1914 to Jan. 1915 Chf. of Survey Party, with City Engr., Imperial, Cal. TT 0.7: P 0.7. Jan. to June 1915 Foreman on highway construction, Imperial and San Luis Obispo Counties, California Highway Comm., Rice & Dutcher, Contrs. TT 0.5: P 0.5. June 1915 to June 1916 Chf. of Party and Supt. of Constr., California Highway Comm., final estimates and maintenance. TT 1: P 1: RC 0.5. June to Sept. 1916 Surveyor, U. S. Engr. Dept., layout on construction of Ft. McArthur, San Pedro, Cal. TT 0.3: P 0.3. Sept. 1916 to Jan. 1917 Field Draftsman, U. S. Reclamation Service, drainage works, Yuma Project. TT 0.3: P 0.3. Jan. to Aug. 1917 Draftsman, Pacific Elec. Ry., Los Angeles. TT 0.6: P 0.6. Aug. 1917 to March 1920 Draftsman, Squad Leader and Chf. of Survey Parties, Union Oil Co. of California, layout of trackwork, tank location and fire walls, direction of record map work, rights of way, etc. TT 2.6: P 2.6: RC 2. March to Sept. 1920 Chf. Inspector, Foundation Co., Point Richmond, Cal., concrete and mill buildings, responsible for piling record, distribution of labor and material, and inspection. TT 0.6: P 0.6: RC 0.6. Sept. 1920 to May 1924 Field and Office Engr. with Harmon S. Bonte, San Francisco, water investigation, irrigation and reclamation design and construction in Tulare Lake Basin, surveys and plans for hydro-electric development, land surveys. TT 3.6: P 3.6: RC 2.6. May to Nov. 1924 Chf. of Survey Party and office work on design of street improvement and drainage, City of Santa Cruz, Cal. TT 0.5: P 0.5: RC 0.2: D 0.3. Nov. 1924 to Jan. 1926 Asst. Engr., Div. of Eng. and Irrigation, State of California, diamond drill investigation of Kenneth Damsite, Sacramento River. TT 1.1: P 1.1: RC 1.1. Jan. to March 1926 Topographer, North American Corporation, on plane table survey of Old Quick Silver property, Lake County, Cal. TT 0.1: P 0.1: RC 0.1. March 1926 to date Asst. Engr. with H. A. Kluegel, Cons. Engr., San Francisco, Cal., on surveys, locating proposed damsites and preparing maps, graphs and runoff studies, in investigation of runoff and storage possibilities of American River. TT 0.8: P 0.8: RC 0.4. TT 19.4: SP 2: P 17.4: RC 7.5: D 0.3. Refers to G. N. Adams, P. Bailey, H. S. Bonte, H. A. Kluegel, D. W. Ormsbee, R. J. Reed, A. D. Schindler.

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(13) TYLER, IVAN LOUIS, Camp 7, Big Creek, Cal. (Age 28. Born Marshall, Minn.) 1923 S. B. Mass. Inst. Tech. TT 2: SP 2. Dec. 1918 to Feb. 1919 Chainman, California State Highway Comm., on surveys. TT 0.2: SP 0.2. June to Nov. 1918, June to Sept. 1919 and July to Sept. 1921 Recorder on surveys, July to Sept. 1920 Hydrographer, and July 1923 to date Levelman, Transitman and Chf. of Party on construction of experimental test dam, Stevenson Creek power house, penstock, incline, roads, trestles, etc., all for Southern California Edison Co. TT 3.9: SP 1.2: P 2.7: RC 1.2. TT 6.1: SP 3.4: P 2.7: RC 1.2. Refers to R. C. Booth, W. L. Chadwick, H. W. Dennis, R. R. Martel, F. A. Noetzi, D. H. Redinger, W. A. Slater.

## 210

(8) VAGTBORG, HAROLD ALFRED, 914 East Eighty-First St., Chicago, Ill. (Age 22. Born Copenhagen, Denmark.) 1926 B. S., Univ of Ill. TT 2: SP 2. June to Sept. 1923 Concrete Inspector, June to Sept. 1924 Estimator, and June to Sept. 1925 Concrete Foreman on construction, Vagtborg Constr. Co., Chicago, Ill. June 1926 to date Constr. Supt., with C. J. Carlson, Chicago, in complete charge of concrete construction. TT 0.6: P 0.6: RC 0.6. TT 2.6: SP 2: P 0.6: RC 0.6. Refers to H. E. Babbitt, H. C. Boardman, H. Cross, M. L. Enger, M. S. Ketchum, A. N. Talbot, C. C. Williams.

## 211

(4) WEBER, GEORGE, Jr., 1408 North Second St., Harrisburg, Pa. (Age 22. Born Sunbury, Pa.) 1926 B. S., Pa. State Coll. TT 2: SP 2. July 1926 to date Hydrographer, Dept. of Forests and Waters, Commonwealth of Pennsylvania. TT 0.5: SP 0.5. TT 2.5: SP 2.5. Refers to G. S. Beal, R. H. Hosmer, R. O'Donnell, E. D. Walker.

## 212

(5) WESTBY, HARVEY ORLANDO, U. S. Coast and Geodetic Survey, Washington, D. C. (Age 23. Born Maddock, N. Dak.) 1926 B. S. C. E., Univ. of N. Dak. TT 2: SP 2. July 1926 to date Deck Officer, U. S. Coast and Geodetic Survey, Launch Mikawa, on triangulation, topography and hydrography. TT 0.5: P 0.5. TT 2.5: SP 2: P 0.5. Refers to E. F. Chandler, L. O. Colbert, E. H. Pagenhart, W. E. Parker, F. L. Peacock, G. T. Rude.

## 213

(11) WILKES, PETER FREDERICK, 777 East Washington St., Los Angeles, Cal. (Age 28. Born Blackheath, London, England.) Sept. 1917 to March 1918 with New York Dock Co.,

Eng. Dept., Brooklyn, N. Y., as Jun. Engr., timekeeping, material checking, cost accounting and reports, and Asst. Engr. on construction of piers, bulkheads and warehouses. *TT 0.6: SP 0.6.* April 1918 to Dec. 1921 Engr., The Foundation Co., New York City, on field work in United States and Mexico, also in Estimating and Purchasing Depts., Home Office. *TT 3.7: SP 2.7: P 1: RC 1.* Jan. to June 1922 Estimator, Peter Wilkes & Co., Plumbing Contrs., New York City, office details, contract layouts and planning. *TT 0.5: SP 0.5.* July 1922 to May 1923 Asst. to Constr. Mgr., Purdy & Henderson Co., New York City, purchasing, expediting and sub-contract details for Colonial Hotel, Nassau, Bahama Islands (to cost over \$5 000 000). *TT 0.9: SP 0.6: P 0.3: RC 0.3.* July 1923 to March 1924 Sales Engr., California Brick Co. and Livermore Fire Brick Works (associated companies), San Francisco, Cal., sales and promotion of clay products, Consultant as to construction and design. *TT 0.8: SP 0.6: P 0.2: RC 0.2.* May to Sept. 1924 Engr., The Foundation Co., San Francisco, purchasing and expediting materials for new plant (over \$2 000 000) of Pacific Portland Cement Co., Redwood City, Cal. Estimator on other projects. *TT 0.4: P 0.4: RC 0.4.* Oct. 1924 to date Estimator, The Austin Co. of California, Los Angeles, preliminary design, layouts and estimates on industrial factory and plant construction. *TT 2.3: SP 1: P 1.3: RC 1.3.* *TT 9.2: SP 6: P 3.2: RC 3.2.* Refers to J. H. O'Brien, M. A. Reidy, Jr., N. A. Richards, R. L. Russell, E. L. Soule, R. E. Ward.

## 214

(6) WILL, CURT HESSE, 105 Shenango St., Greenville, Pa. (Age 22. Born Saginaw, Mich.) 1926 B. S. C. E., Univ. of Mich. *TT 2: SP 2.* June to Sept. 1922 Rodman and Chainman, and June to Sept. of years 1923 and 1925 Inspector at asphalt plant and on water supply problem, etc., for City of Saginaw, Mich. Summer 1924 at Univ. of Michigan Surveying Camp. July 1926 to date Draftsman, Chicago Bridge & Iron Works, detailing and checking, Chicago office, and Greenville (Pa.) plant. *TT 0.5: SP 0.5.* *TT 2.5: SP 2.5.* Refers to L. Ayres, J. H. Cissel, L. M. Gram, W. C. Hoad, C. T. Johnston, H. W. King, E. E. Michaels, R. Ridgway, H. E. Riggs, G. T. Seabury, R. H. Sherlock.

## 215

(3) WINANT, LAWRENCE, 9 Holmes St., Poughkeepsie, N. Y. (Age 31. Born Coxsackie, N. Y.) 1920 B. S., Mass. Inst. Tech. *TT 2: SP 2.* Sept. 1920 to Dec. 1921 Asst. Foreman, The Stanley Works, New Britain, Conn. *TT 1.2: SP 1.2.* Dec. 1921 to May 1922 Asst. Engr., Central Hudson Gas & Elec. Co., Poughkeepsie, N. Y., 2 months on drafting, records, etc., then in steam station taking course in operating. *TT 0.4: SP 0.4.* May 1922 to Dec. 1923 Instrumentman, United Hudson Elec. Corporation, Rifton Hydro Development, assisted on surveying for dam and power house construction, inspected placing of concrete, drafting, etc., and (3 months) on electrical construction and erection. *TT 1.6: SP 1.6.* Jan. to June 1924 Draftsman, DeLaval Separator Works, Poughkeepsie, N. Y., rebuilding of small testing machine and design of fixtures and tools. *TT 0.4: SP 0.3: P 0.1: D 0.1.* June 1924 to April 1925 Jun. Asst. Engr., Grade 2, New York State Highway Bureau, Poughkeepsie, on surveys, construction of concrete highways, etc. *TT 0.8: SP 0.6: P 0.2: RC 0.2.* April 1925 to April 1926 Asst. Res. Engr., Interstate Public Service Co., Edwardsport, Ind., steam power-plant development, in charge of laying out, some railroad work, lines and grades, property resurvey, installation and setting of machinery, estimating, etc. *TT 1: P 1: RC 1.* June 1926 to date Fieldman, H. Wales Lines Co. on Bennett School, Millbrook, N. Y., assisted in laying out building, lines and grades, costs and quantities in charge of time and assisted Supt. with general details. *TT 0.6: SP 0.6.* *TT 8: SP 6.7: P 1.3: RC 1.2: D 0.1.* Refers to O. H. Bundy, J. N. Hood, F. B. Maltby, J. Nolen, Jr., W. A. Schuerman, C. M. Spofford, E. A. Van Deusen.

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(6) WITT, CHARLES VICTOR, Witt Steel Co., Greensburg, Pa. (Age 49. Born Gielwitz, Germany.) 1900 M. E., Univ. of Dresden, Germany. *TT 2: SP 2.* 1900 to 1901 Mech. Engr. with Rietschel & Henneberg, Dresden, on installation of large central heating systems. *TT 1: P 1: D 1.* 1901 to 1902 Special Engr. for development of machinery and processes, Carnegie Steel Co., Pittsburgh, Pa. *TT 1: P 1: D 1.* 1902 to 1906 Mech. Engr., Westinghouse Elec. & Mfg. Co., at East Pittsburgh, Pa., until 1905 being Asst. Engr. of Works and later in full charge of Engr. of Works office. *TT 4: P 4: RC 2: D 4.* 1906 to 1926 with James McNeil & Bro. Co., Pittsburgh, as Gen. Mgr., Plate Constr. Works, and later Vice-Pres., Gen. Mgr. and Director; had full charge of office, Works and Constr. Depts., handled large contracts for water-works installations and other steel plate construction. *TT 20: P 20: RC 20: D 20.* July 1926 to date Pres., Witt Steel Co., Greensburg, Pa. *TT 0.5: P 0.5: TT 28.5: SP 3: P 25.5: RC 22: D 26.* Refers to J. N. Chester, P. Didier, J. W. Frazier, F. W. Lyon, C. M. Reppert, N. S. Sprague, E. E. Wall, F. Wilcox.

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(3) **WRIGHT, EARL SEAWARD**, 19 East Fulton St., Gloversville, N. Y. (Age 39. Born Blair, Nebr.) 1913 B. S. of C. E., Carnegie Inst. Tech. TT 2: SP 2. April 1914 to May 1915 Eng. Asst., International Ry. Co., Buffalo, N. Y. line and grade for track reconstruction, surveys, drafting, etc. TT 1.1: SP 1.1. May 1915 to June 1917 Jun. Asst., Public Service Comm., New York City, field subway construction, including base lines, plumbing buildings, checking concrete forms, steel and underpinning work, etc. TT 2.1: SP 2.1. June 1917 to Jan. 1918 Jun. Engr., U. S. Reclamation Service, North Platte Project, being Chf. of plane-table party and on topographic map making. TT 0.5: P 0.5. Jan. to June 1918 Estimator, Denver (Colo.) Tramway Co., on track valuation estimates. TT 0.5: SP 0.5. June 1918 to June 1925 Draftsman, Valuation Dept., Erie R. R., making valuation maps, etc. TT 7: SP 7. June 1925 to date Asst. Engr., Fonda, Johnstown & Gloversville R. R., in charge of field parties on field valuation and monumenting, straightening out complicated land situations in connection with right-of-way maps, etc. TT 1.5: P 1.5. TT 14.7: SP 12.7: P 2. Refers to L. A. Jenny, J. I. Leonard, B. F. Vandervoort, J. B. Whipple, J. Zimmer.

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(12) **WYNNE-EDWARDS, ROBERT MEREDYDD**, 605 Metropolitan Bldg., Vancouver, B. C., Canada. (Age 29. Born Cheltenham, England.) 1921 B. A., Oxford Univ. TT 2: SP 2. Aug. 1921 to Oct. 1923 with A. D. Swan, Cons. Engr., Montreal, Que., Canada, as Asst. Engr. at Vancouver, during construction of various harbor work, including Ballantyne Pier and foundations for two grain elevators (750 000 and 2 000 000 bu.). TT 2.2: SP 1: P 1.2: RC 0.5: D 0.5. Oct. 1923 to date Asst. Engr., Sydney E. Jenkins Co., Ltd., most of time on construction of new Canadian Pacific Ry. terminal pier, at Vancouver, B. C., in charge of laying out work in field (Nov. 1923 to Oct. 1924), of subaqueous work on reinforced concrete pile (May 1925 to May 1926) and of detailing timber superstructures (since Feb. 1926); since Dec. 1924 in charge of costs; at various times also on estimates. TT 3.2: P 3.2: RC 1.5. TT 7.4: SP 3: P 4.4: RC 2: D 0.5. Refers to L. T. Alden, A. W. Earl, J. R. Grant, S. B. Nevius, A. D. Wilder.

## FOR TRANSFER

## FROM THE GRADE OF ASSOCIATE MEMBER

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(1) **BELMONT, FRANKLYN EDWARD**, Assoc. M., 1380 Merriam Ave., New York City. (Elected Oct. 8, 1918.) (Age 46. Born New York City.) 1903 B. S., Cooper Union Evening School of Sci. 1907 C. E., Rens. Pol. Inst. TT 2: SP 2. Jan. to Sept. 1903 and June to Sept. of years 1904-1906 Rodman, Leveler and Draftsman, Interborough Rapid Transit Co. June 1907 to Jan. 1908 Inspector and Draftsman, Ralph B. Carter Co., New York City, on water supplies for country estates, and in charge of building small reservoir and pump-house. March to May 1908 Asst., McClintic-Marshall Constr. Co., on Chelsea Piers, running transit and level, setting points for steel erectors and acting as Timekeeper. May 1908 to June 1909 Draftsman, J. H. Gray Co., Engrs., estimates shop drawings of steel and masonry, detailing and checking. July 1909 Structural Draftsman, Westinghouse, Church, Kerr & Co., New York City, checking shop drawings for steel roof trusses, beams and plate girders, estimates. July 1909 to Feb. 1911 Structural Draftsman, Public Service Comm., New York City, subway design drawings and estimates. Feb. to May 1911 Draftsman, Electric Bond & Share Co., New York City, studies, designs and estimates for hydro-electric development of dam, power-house and transformer station. TT 4.6: SP 0.5: P 4.1: RC 1.5: D 1.7. May 1911 to May 1918 Structural Designer and Acting Asst. Engr., Borough President's office, Bronx, New York City, design, details and specifications for sewers, bridges, grading and paving, retaining walls, examinations and reports. TT 7: P 7: RC 1.5: D 5.5. May 1918 to April 1919 Structural Engr. with Ford, Bacon & Davis, New York City, steel design of industrial buildings, war work, arrangement of facilities, railroad yard, tracks, sewer and water supply, studies of coal-handling and power houses. TT 1: P 1: D 1. May 1919 to Jan. 1920 Engr., Brewster & Co., Long Island City, additions, changes and betterments for increased auto production, etc. TT 0.7: P 0.7: RC 0.7. Feb. 1920 to Jan. 1921 Steel Designer on industrial buildings and power-house addition, and Squad Leader, J. G. White Eng. Corporation, New York City. TT 0.9: P 0.9: RC 0.6: D 0.3. Jan. to Aug. 1921 Steel Designer, Brooklyn (N. Y.) Edison Co., design of ash-pocket and runways, additions and betterments, Gold St. Power House and sub-stations. TT 0.6: P 0.6: D 0.6. Oct. 1921 to Oct. 1922 Asst. Engr., Passaic Valley Sewer Comm., Newark, N. J., reinforced concrete design of lateral connections to trunk sewer. TT 1: P 1: D 1. Jan. to July 1923 Structural Designer, T. E. Murray, Inc., New York City, steel design and some estimates,

Hudson Ave. Power House of Brooklyn Edison Co., frequency changer building addition to Hell Gate Power Plant. *TT 0.5: P 0.5: D 0.5.* Nov. 1923 to March 1924 Structural Designer, Guarantee Constr. Co., New York City, steel design and check of shop plans for coal storage bunker, elevated tanks, etc. *TT 0.4: P 0.4: RC 0.4: D 0.4.* March to Dec. 1924 with Gibbs & Hill, as Steel Designer for outdoor transformer stations, Long Island R. R. and Virginia R. R. and sub-stations, L. I. R. R. *TT 0.8: P 0.8: D 0.8.* Jan. 1925 to date Engr., G. L. Miller & Co., New York City, real estate bonds, apartment houses, hotels, office buildings, etc., checking and approval of structural and architectural plans, estimate of cost, inspection of construction, etc. *TT 2: P 2: RC 2. TT 21.5: SP 2.5: P 19: RC 6.3: D 11.8.* Refers to A. T. Brown, W. T. Chevallier, P. Clow, F. A. Ericson, H. B. Gates, C. S. Green, J. L. Lamb, C. A. McCollough, R. J. Smythe.

## 220

(1) **BESSELIEVRE, EDMUND BULKLEY**, Assoc. M., 300 Pitney Ave., Spring Lake, N. J. (Elected Nov. 27, 1917.) (Age 39. Born Philadelphia, Pa.) 1907 B. S. in E., Central High School of Philadelphia. Municipal Eng. course, International Correspondence Schools. July to Dec. 1906 Bookkeeper and Estimator with William H. Doyle, Plumbing Contr., Philadelphia, Pa., Dec. 1906 to Feb. 1913 with Hydr. Dept., Merritt & Co., Mfrs. sewage-disposal apparatus, etc., Camden, N. J., as Draftsman, Chf. Draftsman, Asst. Chf. Engr., in charge of design, construction and installation of sewage-disposal apparatus and sewage pumping plants. Feb. 1913 to May 1914 member of firm, Horn & Besselievre, Contr. Engrs., New York City, design and construction of sewage pumping stations, acted as Chf. Engr. and Designer, and Chf. of Constr.: July 1914 to Aug. 1918 with Pacific Flush Tank Co., New York City, as Engr. on design, construction and responsible charge of work of sewage-disposal and sprinkling-filter apparatus, siphons, sewage ejectors, sewage screens, etc.; after Dec. 1908 designed numerous sewage-pumping stations (pneumatic ejector type), and had responsible charge of construction of 22 sewage-pumping stations (total daily capacity 8 950 000 gal.), and of installation of sewage-disposal apparatus, siphons, sprinkling filter apparatus, etc. in 50 plants. *TT 11: SP 6: P 5: RC 4.7: D 3.5.* Aug. 1918 to July 1920 with U. S. Army, until March 1919 as Asst. Advisory Engr. of Sanitation, Constr. Div., War Dept., in Washington, D. C., in charge design, supervision of construction of sewer systems and sewage-treatment plants, specializing in design of trickling filters, dosing tanks; then Advisory Engr. on Sanitation, Mexican Border, San Antonio, Tex., in complete charge policy, design of plants, layouts, specifications, field surveys, award of contracts for 27 posts providing complete sanitary facilities (over \$500 000); after Dec. 1919 Engr. of Design and Constr., in charge water supply and sewerage (\$150 000) at Picatinny Arsenal, Dover, N. J., in complete charge of design, award of contracts and supervision. *TT 1.8: P 1.8: RC 1.8: D 1.8.* Aug. to Dec. 1920 Special San. Engr. in charge Bubonic Plague Eradicative Measures for Texas State Dept. of Health, Beaumont, Tex., at Beaumont and Galveston, Tex., formulated regulations for control of freight-car ratproofing, wrecking (rat harborages) and ship inspection. *TT 0.4: P 0.4: RC 0.4.* Dec. 1920 to April 1921 Chf. Engr., Lakehurst (N. J.) Experimental Plant, Chemical Warfare Service, U. S. Army, responsible for design, specifications, surveys, award of contracts, etc., for all civil engineering works, including fragmentation chamber, photographic laboratories, electric light, water supply, sewerage, etc. *TT 0.3: P 0.3: RC 0.3: D 0.3.* April to July 1921 Pres., Besselievre-Disher & Miller, Inc., Engrs. and Constructors, New York City, designing and constructing sewage pumping stations and sewer systems for Spring Lake, and Madison, N. J., and reports on plants at Merchantville, N. J., and Pleasantville, N. Y. *TT 0.3: P 0.3: RC 0.3: D 0.3.* July 1921 to date San. Engr., Mgr., Eastern Territory, San. Eng. Div., The Dorr Co., Inc., New York City, in charge development of sales, installation equipment for sewage- water- and industrial- waste-treatment plants; design, supervision of construction and operation of fine screen plant, sedimentation tanks, pumps, sludge digestion plants, etc., for 65 plants in United States and Canada (construction over \$10 000 000, equipment over \$550 000); assisting consulting, municipal, state and industrial engineers on problems and in design of plants for treatment of water, sewage and industrial wastes. *TT 5.3: P 5.3: RC 5: D 5.3. TT 19.2: SP 6: P 13.2: RC 12.6: D 11.3.* Refers to L. S. Doten, G. A. Johnson, M. R. Pugh, A. L. Sherman, G. W. Simons, Jr., J. F. Skinner, G. R. Solomon.

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(4) **BOWMAN, HARRY LAKE**, Assoc. M., Drexel Inst., Philadelphia, Pa. (Elected March 12, 1923.) (Age 37. Born Philadelphia, Pa.) 1911 B. S. in C. E., Pa. State Coll. 1914 S. M., Mass. Inst. Tech. *TT 2: SP 2.* June 1911 to Sept. 1915 Draftsman and Checker, American Bridge Co., Pencoyd, Pa., detailing and checking shop drawings for steel buildings and bridges; on leave of absence taking graduate work at Massachusetts Inst. of Technology (Sept. 1913-June 1914) and Instructor in Civ. Eng., Purdue Univ. (Feb. to June 1915). *TT 4.2: SP 3.1: P 1.1.* Sept. 1915 to April 1918 Prin. Asst., to C. E. Smith, Cons. Engr., St.

Louis, Mo., at times in charge of office; designing railway bridges, docks, stock yard structures, railway electrification. *TT 2.6: P 2.6: RC 2.6: D 2.6.* April 1918 to Sept. 1919. Asst. Engr., Bridge and Bldg. Dept., Philadelphia & Reading Ry., Philadelphia, 9 months on construction of Tulip St. Engine Terminal, 9 months on design of bridges and buildings. *TT 1.5: P 1.5: RC 0.7: D 0.8.* Sept. 1919 to Sept. 1926 Asst. Prof. of Structural Eng., Massachusetts Inst. of Technology. Sept. 1926 to date Prof. of Civ. Eng., Drexel Inst., Philadelphia, in charge of Civ. Eng. Dept.; since Sept. 1919 also Cons. Engr. for contractors and architects on designs and reports. *TT 7.2: P 7.2: RC 7.2: D 1.5.* *TT 17.5: SP 5.1: P 12.4: RC 10.5: D 4.9.* Refers to C. B. Breed, F. L. Castleman, C. Dillenbeck, C. E. Smith, C. M. Spofford.

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(12) **CARMICHAEL, JAMES TROY**, Assoc. M., Box 398, Helena, Mont. (Elected June 6, 1921.) (Age 36. Born Augusta, Mont.) 1907 to 1910 student, Univ. of Missouri (2 years) and Univ. of Washington (1 year). *TT 1: SP 1.* June 1910 to April 1912 Computer and Draftsman, Eng. Dept., Seattle, Wash. *TT 1.8: SP 0.7: P 1.1.* April 1912 to Jan. 1913 Asst. Engr., The Franco-Canadian Trust Co., Victoria, B. C., in charge of office and field parties on design of water-works and sewer system and of construction of all municipal improvements on 575-acre sub-division. *TT 0.8: P 0.8: RC 0.8: D 0.8.* Jan. to July 1913 Asst. Supt., construction of irrigation system (15 000 acres) for Sinclair, B. C., designed contractor's equipment. *TT 0.5: P 0.5: RC 0.5: D 0.5.* July 1913 to April 1914 Foreman, and July 1915 to June 1916 Walking Boss, Montague-O'Reilly Co., Gen. Contrs., Portland, Ore. *TT 1.8: P 1.8: RC 1.8.* April to Dec. 1914 Inspector and Chf. of Eng. Party on hydro-electric construction (\$2 000 000). *TT 0.7: P 0.7: RC 0.7.* Dec. 1914 to July 1915 Asst. Engr. in charge of appraisal of underground construction, Pacific Telegraph & Telephone Co., Portland, Ore. *TT 0.6: P 0.6: RC 0.6.* June to Dec. 1916 Supt., P. G. Dunn & Co., Paving Contrs., Seattle. *TT 0.5: P 0.5: RC 0.5.* Dec. 1916 to April 1920 Ranch Mgr. (not engineering). April 1920 to May 1921 Asst. City Engr., Helena, Mont., in charge of survey and plans for 5 miles of streets; construction of 5 miles of water mains. *TT 1: P 1: RC 1: D 0.4.* May 1921 to May 1922 Res. Engr., Montana Highway Comm. on paving construction, *TT 1: P 1: RC 1.* May 1922 to date City Engr., Helena, Mont., in charge of paving construction (\$500 000) and sewer and water main design and construction; Cons. Engr. on paving, sewer and water main work (approx. \$200 000) in Montana. *TT 4.7: P 4.7: RC 4.7: D 1.5.* *TT 14.4: SP 1.7: P 12.7: RC 11.6: D 3.2.* Refers to E. K. Carter, E. B. Donohue, J. N. Edy, H. W. Holmes, W. A. Lamb, R. D. Rader, W. M. Spann.

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(15) **CHAPPELL, FRANK WILSON**, Assoc. M., 615 Slaughter Bldg., Dallas, Tex. (Elected Nov. 27, 1917.) (Age 45. Born McKenzie, Tenn.) 1903 A. B., and 1905 B. E., Vanderbilt Univ. *TT 2: SP 2.* June to Sept. 1902 Rodman, Louisville & Nashville Ry. Co. June to Sept. 1903 Rodman and Instrumentman on surveys in Kentucky, Tennessee and Alabama. June to Sept. 1904 Transmittan, railway location, Arkansas. June to Sept. 1905 Topographer, Nashville Interurban Ry. *TT 0.3: SP 0.3.* Oct. 1905 to Feb. 1906 and June to Oct. 1907 Res. Engr., under Granberry Jackson, Nashville, Tenn., on water-works construction, Princeton, Ky., and (after June 1907) on sewer construction, Covington, Tenn. *TT 0.8: P 0.8.* May 1906 to May 1907 Inspector, street pavement construction, City of Paducah, Ky. *TT 1: SP 1.* Feb. 1908 to Jan. 1909 Instrumentman and Draftsman, Cumberland River Improvement, U. S. Engr. Corps. *TT 1: SP 1.* March to May 1909 Draftsman, Moore & McClure, Oklahoma City, Okla. June to Aug. 1909 Draftsman for Oklahoma City. *TT 0.5: SP 0.5.* Sept. 1909 to Aug. 1911 Associate Prof. and Director of School of Civ. Eng., Univ. of Oklahoma. *TT 2: P 2: RC 2.* Sept. 1911 to Sept. 1915 building contracting, Dallas, Tex. *TT 4.1: P 4.1: RC 4.1.* Oct. 1915 to Sept. 1919 Designing Engr., with Gaines & Dewees, Builders Metal Products Co., and Southern Wire & Iron Co., Dallas, independent design of numerous structures of steel and concrete in Texas. *TT 4: P 4: RC 4: D 4.* Oct. 1919 to Feb. 1925 Chf. Designing Engr., Elrod Eng. Co., Dallas, independent design of dams, water-works, sewerage systems, street pavements and concrete building frames in many cities and towns in Texas. *TT 5.5: P 5.5: RC 5.5: D 5.5.* March 1925 to date Designing Engr., R. J. Dewees Co., Dallas, independent designing of steel and concrete structures. *TT 1.8: P 1.8: RC 1.8: D 1.8.* *TT 23: SP 4.8: P 18.2: RC 17.4: D 11.3.* Refers to J. S. Barlow, H. E. Elrod, R. O. Jameson, W. H. Meier, J. L. O'Hearn, W. J. Powell.

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(4) **CRITCHLOW, HOWARD THOMPSON**, Assoc. M., State Office Bldg., Trenton, N. J. (Elected Junior Jan. 2, 1912; Assoc. M. Dec. 2, 1914.) (Age 41. Born Prospect, Pa.) 1910 C. E., Cornell Univ. *TT 2: SP 2.* June 1910 to June 1911 Field and Dist. Hydrographer, Isthmian Canal Comm., Canal Zone, Panama, collecting hydrographic data in connection with water supply problems, of Panama Canal. *TT 1: P 1.* July 1911 to April 1914 Chf. Hydrographer, Panama Canal, in responsible charge of collecting hydrographic data, flood

predictions, water-supply investigations. *TT 2.8: P 2.8: RC 2.8.* May 1914 to July 1915 Asst. Engr., Water Supply Comm. of Pennsylvania, compiling gazetteer of streams of Pennsylvania. *TT 1.2: P 1.2: RC 1.2.* July to Sept. 1915 Asst. Engr., Water Resources Branch, U. S. Geological Survey, surface water investigations in Wisconsin and Minnesota. *TT 0.3: P 0.3.* Oct. 1915 to April 1917 Instructor and Graduate Student, Coll. of Civ. Eng., Cornell Univ. *TT 1.5: P 1.5.* April 1917 to June 1924 Hydr. Engr., New Jersey Dept. of Conservation and Development, and July 1924 to date Chf., Div. of Waters, in responsible charge of investigation of water-supply sources, surface and underground water investigation; examining applications for diversion, and plans for dams; July 1924 to June 1925 also Cons. Engr., New Jersey-Delaware River Treaty Comm., advising on technical problems. *TT 9.7: P 9.7: RC 9.7.* *TT 18.5: SP 2: P 16.5: RC 13.7.* Refers to F. A. Barnes, J. H. Cook, N. S. Hill, Jr., H. N. Ogden, R. M. Riegel, C. M. Saville, M. R. Sherrerd.

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(2) EVERETT, FREDERIC ELWIN, Assoc. M., 56 Beacon St., Concord, N. H. (Elected Dec. 6, 1915.) (Age 50. Born New London, N. H.) 1896 to 1899 student, Massachusetts Inst. of Technology. *TT 1: SP 1.* 1899 to 1900 Draftsman, New England Telephone & Telegraph Co., Boston, Mass. *TT 0.8: SP 0.8.* 1900 to 1906 Transitman, Asst. Engr. and Engr., Park Dept., Cambridge, Mass. *TT 6: SP 1: P 5: RC 2.* 1906 to date with State Highway Dept., Concord, N. H., until 1911 as Asst. Engr. in charge of survey and plan work, including layout and construction, then Div. Engr. in charge of construction and maintenance, including preliminary design of plans, estimates, etc., and since 1915 Commr. and Chf. Engr. in charge of the Department, including design and layout of trunk line system of highways (1500 miles) (expenditure in 1925 about \$5 000 000). *TT 20.7: P 20.7: RC 16.5: D 11.2.* *TT 28.5: SP 2.8: P 25.7: RC 18.5: D 11.2.* Refers to J. C. Chase, A. W. Dean, G. H. Henderson, H. C. Hill, J. A. Holmes, P. D. Sargent, J. W. Storrs.

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(1) GOODKIND, MORRIS, Assoc. M., 32 Hardenbergh St., New Brunswick, N. J. (Elected Jan. 13, 1919.) (Age 38. Born New York City.) 1908 A. B., Columbia Coll. 1910 C. E. School of Mines, Columbia Univ. *TT 2: SP 2.* June to Dec. 1910 Structural Draftsman, Public Service Comm., New York State, detailing and designing New York subways. *TT 0.6: SP 0.6.* Jan. to April 1911 Instrumentman, Bureau of Highways, New York City, on surveys for subways. *TT 0.3: SP 0.3.* May 1911 to May 1914 Structural Designer, Inspector and Asst. Engr. with Albert Lucius, Cons. Engr., New York City, in charge of steel inspection in mills and fabricating shops, design of bridges, stations and roundhouses for Pittsburgh & Lake Erie R. R. and Oregon & Washington R. R., also investigated structures and prepared design for competitive bids. *TT 3: SP 0.7: P 2.3: RC 2.3: D 2.3.* June 1914 to Aug. 1918 Structural Designer, Interborough Rapid Transit Co., New York City, on design of Webster Ave. Extension to Third Ave. Elev. R. R., substations and train sheds. *TT 4.3: P 4.3: RC 4.3: D 4.3.* Sept. to Dec. 1918 Structural Engr., J. G. White Eng. Corporation, New York City, on design of Muscle Shoals Nitrate Plant and of foreign railroad properties. *TT 0.3: P 0.3: RC 0.3: D 0.3.* April 1919 to June 1922 Bridge Engr., Mercer County, Trenton, N. J., in charge of design, construction and maintenance of highway bridges. *TT 3.3: P 3.3: RC 3.3: D 2.5.* July 1922 to date with State Highway Comm., Trenton, until Dec. 1924 as Gen. Supervisor of Bridges and Structures, in charge of maintenance of all highway bridges and of construction of bridges built by State labor, prepared designs for strengthening structures; since Jan. 1925 Bridge Engr. in charge of design and construction of all bridges (average \$2 500 000 annually) and of operation of all drawbridges in the system; also supervision of all county bridges constructed with State aid. *TT 4.5: P 4.5: RC 4.5: D 2.1.* *TT 18.3: SP 3.6: P 14.7: RC 14.7: D 11.4.* Refers to C. S. Bissell, F. C. Carstarphen, A. C. Gregory, S. Johannesson, M. den H. Kolyn, W. G. Sloan, J. L. Vogel.

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(7) HATCH, DONALD MONROE, Assoc. M., 506 First St., Jackson, Mich. (Elected Junior Dec. 6, 1920; Assoc. M., May 8, 1922.) (Age 32. Born Marshall, Mich.) Registered Civ. Engr., State of Michigan. 1918 B. S. of C. E., Univ. of Mich. *TT 2: SP 2.* June to Oct. of years 1913 and 1914 Inspector, Calhoun County Road Dept. June to Oct. of years 1915 and 1916 with Chas. Sawyer, Marshall, Mich., as Rodman and Transitman, surveying power-transit line, etc. June to July 1917 railroad location surveying, Camp Custer. Dec. 1917 to Feb. 1918 Flying Cadet, Military School of Aeronautics, Columbus, Ohio. *TT 0.2: SP 0.2.* May 1918 to Jan. 1919 with U. S. Army Engrs., Third Engr. Training and Replacement Regt., Camp Humphreys, Instructor, engineer drill, bridges, etc. *TT 0.7: SP 0.7.* Jan. 1919 to May 1920 Res. Engr. for R. Winthrop Pratt, on Wyandotte water extension (\$300,000), consisting of filtration plant, intake extension, low-lift station, etc. *TT 1.4: P 1.4: RC 1.4.* May 1920 to June 1922 Supt., Municipal Dept., City of Wyandotte, responsible charge of water, power and filter plants, water and electric distribution and of operation, maintenance

and extension; installed extensions, two centrifugal pumps (3 000 000 and 6 000 000 gal.), fly-wheel pump (5 000 000 gal., \$24 000), switchboard (\$4 000), Westinghouse turbine (\$37 000), etc.; designed garage and storehouse (reinforced concrete, \$20 000), also plans and specifications, fire-alarm and boulevard lighting systems, power distribution extension (\$20 000). *TT 2.1: P 2.1: RC 2.1: D 1.5.* July to Oct. 1922 Engr., Calhoun County Highway Dept. *TT 0.2: P 0.2: RC 0.2.* Oct. 1922 to date Supt. and Chf. Engr., Dept. of Water Supply, Jackson, Mich., supervised construction of works plant (\$40 000), designed and supervised construction of water-main extensions (\$350 000); in responsible charge of operation, maintenance and extension. *TT 4.2: P 4.2: RC 4.2: D 2.5. TT 10.8: SP 2.9: P 7.9: RC 7.9: D 4.* Refers to A. S. Ackerman, H. L. Blomsheld, J. S. Bowman, W. G. Fargo, G. H. Fenkell, R. F. MacDowell, H. E. Riggs, F. H. Stephenson, H. A. Stringfellow, W. W. Tefft.

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(5) **KEEFER, CLARENCE EDWARD**, Assoc. M., 1720 Bolton St., Baltimore, Md. (Elected Junior June 1, 1920; Assoc. M., Oct. 2, 1922.) (Age 35. Born Baltimore, Md.) 1919 B. E., Johns Hopkins Univ. *TT 2: SP 2.* May to Oct. 1911 Rodman, Towson & Cockeysville R. R., Towson, Md. *TT 0.4: SP 0.4.* Oct. 1911 to June 1912 Rodman and Draftsman, Roland Park (Md.) Co. *TT 0.7: SP 0.7.* June to Aug. 1912 Draftsman, Edw. V. Coonan Co., Baltimore, Md. *TT 0.1: SP 0.1.* Sept. 1912 to May 1913 Draftsman, Computer & Estimator, State Roads Comm., Baltimore, Md. *TT 0.7: SP 0.7.* May 1913 to July 1914 and April-Sept. 1915 Draftsman, Baltimore Sewerage Comm. *TT 1.6: SP 1.6.* July to Nov. 1914 Draftsman, Topographical Survey of Baltimore. *TT 0.3: SP 0.3.* June to Sept. 1916 Draftsman, and June to Aug. 1917 Draftsman and Computer, Baltimore & Ohio R. R. Aug. to Sept. 1918 Field Engr., Raymond Concrete Pile Co., in charge of locating ore bins and pumping station. July 1919 to date with Sewer Div., (now Bureau of Sewers), Baltimore City, until Jan. 1920 as Asst. Engr. on design of small sewage treatment plants, sewage-pumping station, layout and design of storm drains and sanitary sewers, and design of concrete masonry, and since Jan. 1920 Asst. Civ. Engr., Highways Dept. in charge of design and construction of concrete tanks, pumping stations, sludge drying beds, and other improvements at Baltimore Sewage-Treatment Works (cost to date approx. \$1 000 000); since Sept. 1923 in charge of operation of Baltimore Sewage Treatment Works and Eastern Ave. Sewage-Pumping Station (approx. \$200 000 annually), and other treatment plans, including research and experimental work, since Jan. 1926 being Prin. Asst. to Sewerage Engr. *TT 7.5: P 7.5: RC 7.5: D 7.5. TT 13.3: SP 5.8: P 7.5: RC 7.5: D 7.5.* Refers to J. W. Armstrong, A. E. Christhill, B. L. Crozier, J. H. Gregory, S. Purcell, G. J. Requardt, G. F. Wiegardt.

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(5) **MACQUEEN, PHILIP OUTERBRIDGE**, Assoc. M., 1657 Thirty-First St., N. W., Washington, D. C. (Elected Nov. 27, 1917.) (Age 43. Born Washington, D. C.) 1907 C. E., Lehigh Univ. *TT 2: SP 2.* Summers 1903 to 1906 Rodman and Topographer, Engr. Corps, Baltimore & Ohio R. R. Aug. to Oct. 1907 Timekeeper, Dravo Contr. Co., Pittsburgh, Pa., on bridge construction. *TT 0.3: SP 0.3.* Oct. 1907 to Jan. 1908 Rodman and Leveler, Erie R. R. *TT 0.3: SP 0.3.* March to Nov. 1908 Surveyman, U. S. Army Engr. Office, Washington, D. C. *TT 0.7: SP 0.7.* Nov. 1908 to June 1918 Surveyman, Gen. Foreman and Jun. Engr., Mun. Eng. Div., Panama Canal, 5 years on surveys for water-works, reservoir and two filter plants, 1 year on operation of filter plant and 3 years in charge of construction of roads, water and sewer systems for two army posts. *TT 9.5: SP 3.5: P 6: RC 2.5: D 0.5.* June to Sept. 1918 First Lieut., Corps of Engrs., U. S. Army. *TT 0.3: P 0.3.* Sept. to Nov. 1918 Draftsman, U. S. Housing Corporation, Butler Project, Pittsburgh. *TT 0.2: P 0.2.* Feb. to Sept. 1919 on surveys, Valuation Dept., Baltimore & Ohio R. R. *TT 0.6: P 0.6.* Oct. 1919 to April 1920 Asst. Engr., Water Dept., Cleveland, Ohio, being Asst. on design of Baldwin Filter Plant and Reservoir. *TT 0.6: P 0.6: D 0.6.* April 1920 to Jan. 1923 with Frazier-Ellms-Sheal Co., Engrs., Cleveland, as Asst. Engr. (under Vice-Pres.), on design, estimates, specifications and studies for filter plant projects at Milwaukee, St. Paul and Bay City; on plans and (1 year) acted as Res. Engr. on construction of Bay City Filter Plant. *TT 2.7: P 2.7: RC 2.7: D 2.* Feb. 1923 to date with U. S. Engr. Office, War Dept., on water-supply project for Washington, D. C., 1 year as Jun. Engr. checking designs, 2 years Asst. Engr. in charge of drafting room (under Senior Engr.) on plans and specifications for water-supply project, 1 year in direct charge of construction (under Supt.) of new filter plant work (\$2 500 000); since Oct. 1926 Associate Engr. *TT 3.9: P 3.9: RC 3: D 2. TT 21.1: SP 6.8: P 14.3: RC 8.2: D 5.1.* Refers to J. W. Armstrong, R. N. Begien, J. E. Curtis, J. W. Ellms, A. Richards, A. V. Ruggles, J. D. Stevenson.

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(1) **NEWMAN, JAMES BLAINE**, Assoc. M., 883 Franklin Ave., Brooklyn, N. Y. (Elected April 3, 1922.) (Age 34. Born Detroit, Mich.) 1914 B. A. E., and 1924 A. M. (Economics), Univ. of Mich. 1917 diploma in Mech. Eng., Lowell Inst. TT 2: SP 2. Dec. 1914 to Nov. 1915 Structural Designer with Donaldson & Meler, Archts., Detroit, Mich. TT 0.9: P 0.9: D 0.9. Nov. 1915 to Feb. 1916 Structural Detailer, American Bridge Co., Detroit. TT 0.3: SP 0.3. Feb. 1916 to Sept. 1917 Designer, steel and concrete, with Stone & Webster, Boston. TT 1.7: P 1.7: D 1.7. Sept. 1917 to June 1918 Asst. in Civ. Eng. and graduate student, Massachusetts Inst. of Technology. TT 0.7: P 0.7. June to Nov. 1918 Structural Designer with Monks & Johnson, Boston. TT 0.3: P 0.3: D 0.3. June to Sept. 1914 architectural drafting and March 1919 to Sept. 1920 Architectural Eng. Squad Chf. with Smith, Hinchman and Grylls. TT 2.1: SP 0.3: P 1.8: RC 1.5: D 0.3. Sept. 1920 to June 1925 Asst. Prof. of Architecture, Univ. of Michigan, also since Sept. 1920 (while teaching) and June to Sept. 1922 Consultant in architectural engineering problems and Structural Designer and Checker on several buildings, including Coliseum, Michigan State Fair, armory, Lansing, Mich., Salvation Army, Ann Arbor (both steel), storehouse (concrete), Univ. of Michigan; June to Sept. 1921 Architectural Designer (plans), Detroit, Dept. of St. Rys.; June to Sept. 1923 Structural Designer, American Car & Foundry Co., New York City, in responsible charge of design of large cupola house and elevated coal bunker; June to Sept. 1924 Architectural Eng. Draftsman, with Buchman & Kahn, Archts., New York City. TT 4.7: P 4.7: RC 4.1: D 0.3. June 1925 to date with Buchman & Kahn, Archts., on responsible executive work in planning large office and loft buildings, New York City, including 2 Park Ave., Park Murray, Lefcourt and State Bldgs. TT 1.5: P 1.5: RC 1.5. TT 14.2: SP 2.6: P 11.6: RC 7.1: D 3.5. Refers to L. M. Gram, L. J. Johnson, F. N. Menefee, G. F. Swain, A. L. Trout, J. A. Van den Broek, W. S. Wolfe.

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(12) **PAULSEN, CARL GUSTAV**, Assoc. M., Federal Bldg., Boise, Idaho. (Elected May 13, 1918.) (Age 38. Born Chicago, Ill.) 1913 B. S. C. E., Univ. of Idaho. TT 2: SP 2. June to Oct. 1910, Feb. 1911 to Feb. 1912 and June to Aug. 1913 Field Asst., U. S. Reclamation Service, Boise, Idaho, duty-of-water and hydraulic investigations. TT 1.4: P 1.4. June to Sept. 1912 Field Asst., U. S. Dept. of Agriculture, Boise, seepage and duty-of-water investigations. Sept. 1913 to date (except Oct. to Dec. 1917 with U. S. Army, Camp Lewis, Wash.) with U. S. Geological Survey, as follows: Sept. 1913 to March 1914, Field Asst.; April 1914 to July 1917, Jun. Engr.; Aug. to Oct. 1917, Asst. Engr.; on stream flow investigations in Idaho, Oregon and Washington, including stream-discharge measurements, analysis and preparation of data for reports, etc.; about 1 year Prin. Asst. in Tacoma office in charge of field work in eastern Washington; since Jan. 1918 Dist. Engr., 1½ years at Atlanta, Ga., and remainder of time at Boise, planning, directing analysing results, etc., of hydraulic investigations in Georgia, Alabama, Tennessee, North Carolina, Florida and Idaho, making water power studies and reports, etc.; during war made investigations and reports on hydraulic and steam-power developments in co-operation with U. S. Fuel Administration. TT 13.1: P 13.1: RC 10. TT 16.5: SP 2: P 14.5: RC 10. Refers to G. C. Baldwin, L. Crandall, E. B. Darlington, N. C. Grover, J. C. Hoyt, G. L. Parker, A. J. Wiley.

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(12) **SEWELL, HAROLD ARTHUR**, Assoc. M., Newport, Wash. (Elected Nov. 28, 1916.) (Age 37. Born Waverly, Iowa.) 1911 B. S. in Civ. Eng., 1912 B. A. in Mathematics, and 1914 C. E., State Coll. of Wash. TT 2: SP 2. Summer 1906 Rodman with County Engr., Waverly, Iowa. June to Sept. 1909 Transitman and Inspector in charge of street grading, macadam and sidewalk construction in Burlington, Wash. July to Sept. 1910 Rodman and Draftsman, with City Engr., Pullman, Wash., on design of sewer system, septic tank, etc. July to Sept. 1911 Transitman, Day-Luellwitz Lumber Co., Spokane, Wash. TT 0.2: SP 0.2. Sept. 1911 to June 1912 Instructor in Elementary Mathematics, State Coll. of Washington. TT 0.8: P 0.8. July 1912 to Jan. 1913 Deputy County Engr., Pend Oreille County, Wash., located 40 miles of roads and designed several structures, also survey and design of Orchard Homes Irrigation System. TT 0.5: P 0.5: D 0.2. Jan. 1913 to Jan. 1924 Town Engr., Newport, Wash., in direct charge of grading and sidewalk construction, surveys and plats of additions; made physical valuation of public utilities and appeared before Public Service Comm. of Washington, Jan. 1915 to Jan. 1919 County Engr., Pend Oreille County, on location, design and construction of 15 miles permanent highways (\$50 000), location of 100 miles county roads, design of bridges, maintenance (\$10 000) state and permanent highways, expert testimony in many suits. Sept. 1916 to Jan. 1926 Engr., Panhandle Lumber Co., Spirit Lake, Idaho, location, design and construction of flumes, railways, beams, etc. (\$300 000); expert testimony in suits involving right-of-way and water rights. Jan. 1913 to Jan. 1925 general location, design and construction, including flumes, two bridges over

Pend Orelle River, highways, transmission running April 1919 lines, dams, irrigation systems, etc. Since April 1919 Engr. and Mgr., Interstate Eng. & Constr. Co., construction (\$123 000), location, design and construction (\$239 000), flumes, dams, highways, railways, bridges, etc., and since April 1920 Engr., Callspel Light & Power Co., location, design, construction and expert testimony involved in construction of dam, flume, penstock, power-house, transmission line and distribution system (\$175 000). *TT 14: P 14: RC 14: D 14. TT 17.5: SP 2.2: P 15.3: RC 14: D 14.* Refers to M. Chase, H. J. Doolittle, J. L. Stannard, R. K. Tiffany, O. L. Waller, A. J. Wiley.

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(10) **SHAW, HOBART DOANE**, Assoc. M., P. O. Box 25, Gulfport, Miss. (Elected Nov. 28, 1916.) (Age 47. Born Carrollton, Miss.) 1903 B. S. Miss. A. & M. Coll. *TT 2: SP 2.* Dec. 1903 to March 1904 Rodman, Knox-George & Co. *TT 0.2: SP 0.2.* April to Dec. 1904 Chf. Draftsman and Gen. Asst. for County Engr., Vigo County, Ind. *TT 0.7: P 0.7.* Dec. 1904 to Jan. 1906 Asst. Engr. and Draftsman, Southern Indiana Ry., Terre Haute, Ind. *TT 1.1: SP 0.5: P 0.6: D 0.5.* Jan. 1906 to March 1908 Asst. Engr. and Chf. Draftsman, Gulf & Ship Island R. R., Gulfport, Miss. *TT 2.2: P 2.2: RC 1.1: D 1.2.* Aug. 1909 to April 1910 general practice, including supervision of railroad construction for Louiselle Lumber Co., Pearl River County, Miss. *TT 0.6: P 0.6: RC 0.6.* Jan. 1915 to May 1916 Representative, Dixie Portland Cement Co. of Chattanooga, Tenn., for State of Mississippi. *TT 1.3: SP 1.3.* March 1908 to Aug. 1909 Asst. City Engr., April 1910 to Jan. 1915 City Engr. and Supt. of Water-Works, and May 1916 to date City Engr., Gulfport, during latter period municipal improvements included water-works extensions and construction (approx. \$150 000), and street improvements (drainage and paving) (\$700 000); considerable general practice. Since June 1924 also Chf. Engr., Harrison County Road Protection Comm., designing and superintending construction of shore protection (24 miles), reinforced concrete step-type sea wall (total \$3 400 000, under construction). *TT 16.9: P 16.9: RC 15.4: D 5.2. TT 25.1: SP 4.8: P 20.3: RC 17: D 8.* Refers to J. F. Coleman, J. H. Dorroh, G. G. Ehrenborg, J. P. Ewin, B. H. Hardaway, S. L. McGlathery, N. H. Sayford, A. M. Shaw, S. M. Young.

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(11) **SLATTERY, FREMONT W.**, Assoc. M., 513 North E St., Imperial, Cal. (Elected Dec. 15, 1924.) (Age 35. Born Lead City, S. Dak.) 1914 B. S. C. E., Highland Park Coll. (now Des Moines Univ.) *TT 2: SP 2.* Feb. 1915 to June 1922 with U. S. Reclamation Service, until Aug. 1917 as Instrumentman and Chf. of Party, Boise Project, on field investigations, location of drains, staking canals, etc., then Asst. Engr., Rio Grande Project, 1½ years on drainage system, estimates and designs, and 3½ years in charge of construction unit building drainage and irrigation canals and structures, handling excavating equipment and design. *TT 7.3: SP 3.5: P 3.8: RC 3.8: D 3.5.* June 1922 to Feb. 1923 Drainage Engr., Palo Verde Drainage Dist. in charge of investigations, locations and plans and specifications for construction of drainage canals. *TT 0.8: P 0.8: RC 0.8: D 0.8.* Feb. 1923 to date with Imperial Irrigation Dist., until Aug. 1925 as Asst. Engr. in charge of field study, design and construction of drainage system (about \$1 000 000 annually), and since then Drainage Engr. in charge of field engineering, design of drainage works and appurtenant structures, and of all drainage construction; work also includes designs and construction of major work in connection with irrigation system. *TT 3.8: P 3.8: RC 3.8: D 3.8. TT 13.9: SP 5.5: P 8.4: RC 8.4: D 8.1.* Refers to J. L. Burkholder, R. S. Carberry, L. M. Lawson, D. W. Murphy, F. D. Pyle, S. L. Rothery.

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(4) **STEINBRUCH, WALTER**, Assoc. M., 738 Morgan Ave., Drexel Hill, Pa. (Elected Junior May 6, 1914; Assoc. M. Sept. 9, 1919.) (Age 33. Born Magdeburg, Germany.) 1913 C. E., Columbia Univ. *TT 2: SP 2.* May to July 1912 and May to Sept. 1913 Instructor, Columbia Univ. Summer School of Surveying. *TT 0.3: SP 0.3.* Sept. 1913 to April 1916 and Dec. 1916 to April 1917 Asst. Engr., McMullen, Snare & Triest, Inc., on construction of Lexington Ave. subway, Sec. 13, New York City. *TT 3: SP 0.3: P 2.7: RC 0.3.* April to Dec. 1916 and May 1917 to May 1918 Engr., The Snare & Triest Co. on construction of two towers of Hell Gate Bridge over East River, New York City, and (after May 1917) in charge of layout and construction of sewers and water lines at cantonment Ft. Oglethorpe, Ga., and construction of 53 ammunition storehouses at Lake Denmark, N. J. *TT 1.8: P 1.8: RC 1.8: D 0.3.* May 1918 to May 1923 with The Austin Co., until May 1919 as Chf. Engr. and Asst. Supt. in charge of construction of 30 ammunition storehouses at Lake Denmark, then on construction of bakery at Chester, Pa., and after March 1920 Supt. of Constr. on industrial buildings at Lancaster, Essington and State College, Pa., and Florence, N. J. *TT 5: P 5: RC 5: D 1.1.* May 1923 to March 1924 Contr. at Florence, construction of power house and other industrial buildings, dwellings, municipal work, etc. *TT 0.8: P 0.8: RC 0.8: D 0.8.* March 1924 to Aug. 1926 with The Austin Co., until Aug. 1925 as Supt. of Constr. on reinforced con-

crete and steel frame industrial buildings for Continental Fibre Co. at Newark, Del., then in charge of building Palace of Agriculture, Palace of Education, etc., at Sesquicentennial Exposition, Philadelphia, Pa. *TT 2.4: P 2.4: RC 2.4: D 0.8.* Aug. 1926 to date Asst. Supervising Engr., Sesquicentennial Exhibition Association, Philadelphia, Pa. *TT 0.4: P 0.4: RC 0.4: D 0.1.* *TT 15.7: SP 2.6: P 13.1: RC 10.7: D 3.1.* Refers to G. H. Biles, W. Bowie, S. H. Knight, F. J. Litter, W. G. Trieste, R. I. Webber.

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(15) **WAGGENER, ROBERT GARNETT**, Assoc. M., 1005 T. & P. Bldg., Dallas, Tex. (Elected Jan. 17, 1921.) (Age 42. Born Chicago, Ill.) July 1905 to March 1910 with Edison Elec. Co. (now Southern California Edison Co., in Gen. Supt.'s office, Los Angeles, Cal., and Dist. Offices, Redlands and Santa Anna, in charge of operating reports and statistics. *TT 4.7: SP 4.7.* Nov. 1912 to Nov. 1917 private engineering in San Joaquin Valley, Cal., land subdivision, water supply and irrigation, town planning, roads, railroad construction; planned towns of Orange Cove and Novelencia; made stadia survey of Kings River-Centerville Bottoms for Alta Irrigation Dist.; water development work for Orosi Farms Co.; built 25 miles of railroad at Corcoran. *TT 5: P 5: RC 5: D 3.* Nov. 1917 to Jan. 1918 Office Engr. on construction of Reno Branch, Western Pacific Ry. Co. *TT 0.2: P 0.2.* Jan. to Dec. 1918 with Union Pacific Ry. Co. at Rawlins, Wyo., as Asst. Engr. in charge of construction of power house, storehouse and freight yard extension. *TT 0.9: P 0.9: RC 0.9.* Feb. 1919 to date with Texas & Pacific Ry. Co. at Dallas, Tex., as Asst. Engr. designing terminals; designed new freight yards and engine terminals at Gouldsboro, Shreveport, Dallas, Ft. Worth and Sweetwater, including two large locomotive shops; planned and executed grade revisions, and alterations and extensions to general car and locomotive shops at Marshall, reported on Union Passenger Station at Shreveport and Union Belt Line at Ft. Worth. *TT 7.9: P 7.9: RC 7.9: D 7.* *TT 18.7 SP 4.7: P 14: RC 13.8: D 10.* Refers to C. M. Davis, J. B. Hawley, R. L. Holmes, E. N. Noyes, W. J. Powell.

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(14) **WHITNEY, FREDERICK CLIFFORD**, Assoc. M., 4327 McRee Ave., St. Louis, Mo. (Elected April 14, 1919.) (Age 39. Born Liberty, Mo.) About 6 years. Studied Structural Eng., Univ. of Wisconsin (Ext. Div.) Sept. 1912 to May 1914 Structural Detailer, American Bridge Co., St. Louis. *TT 1.7: SP 1.7.* May to Aug. 1914 Structural steel design and detail, Merker Bros., St. Louis. *TT 0.3: SP 0.3.* Aug. 1914 to Jan. 1917 Draftsman, Bridge Dept., Missouri Pacific Ry., St. Louis, designing and checking steel and reinforced concrete structures. *TT 2.4: P 2.4: D 2.4.* Feb. 1917 to Oct. 1918 Structural Engr. and Asst. in charge of Constr. Dept., Rock Island Arsenal, Ill., designing steel and reinforced concrete structures; designed garage with flat slab floor (\$50 000), and steel and concrete for water power dam (\$200 000), etc.; made stadia topographic survey ( $\frac{1}{4}$  sq. mile). *TT 1.7: P 1.7: RC 1.7: D 1.7.* Nov. 1918 to May 1919 Asst. Engr. and Designer with Ford, Bacon & Davis, New Orleans, La., checking and designing reinforced concrete on army-supply base. *TT 0.6: P 0.6: RC 0.6: D 0.6.* Sept. 1919 to Jan. 1920 Estimator, Geo. A. Fuller & Co., St. Louis, on Buick and Chevrolet assembly plants in St. Louis, and on Rose Lake Power House for Pennsylvania R. R., near East St. Louis, Ill. *TT 0.4: SP 0.4.* Feb. 1920 to May 1922 Asst. Engr., M. P. Ry., St. Louis, designing and checking steel and concrete bridges and structures; computing stresses in bridges. *TT 2.3: P 2.3: RC 2.3: D 2.3.* June 1922 to July 1923 Asst. Engr., Board of Education, St. Louis; designed and checked design of steel and concrete for Roosevelt High and Beaumont Schools (\$700 000 and \$600 000) and other buildings. *TT 1.2: P 1.2: RC 1.2: D 1.2.* Aug. 1923 to date with Wm. B. Ittner, Inc., Archts. and Engrs., 1 year as Asst. Engr. and remainder of time Asst. in charge of engineering, design and checking of steel and concrete buildings, including schools, churches, Masonic temples, 4-story community house, cantilever balconies, etc. *TT 3.4: P 3.4: RC 3.4: D 3.4.* *TT 14: SP 2.4: P 11.6: RC 9.2: D 11.6.* Refers to R. G. Alexander; E. A. Hadley, W. D. Hudson, L. T. Maenner, C. E. Smith, F. J. Trelease, S. L. Wonson.

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(1) **WHITNEY, GILBERT CLINTON**, Assoc. M., 270 Madison Ave., New York City. (Elected June 24, 1914.) (Age 43. Born North Adams, Mass.) 1909 to 1917 with New York Central R. R., Elec. Zone, New York City, 3 years as Draftsman on signal estimate, installation and circuit design, and 5 years Asst. Engr. in responsible charge of design of signal duct system, interlocking (mechanical and electrical), sub-interlocking and towers, and general engineering in office of Asst. Terminal Mgr. and Signal Engr. *TT 8: SP 2: P 6: RC 5: D 4.5.* 1917 to 1918 special work, Interborough Rapid Transit Co., New York City, mainly scientific railway signal design and location and circuit design. *TT 0.7: P 0.7: D 0.7.* 1918 to Aug. 1926, Asst. Engr., New York Rapid Transit Corporation, Brooklyn, N. Y., maintenance, development, estimates, engineering railway signal and interlocking, scientific signalling and rapid transit train operation, in responsible charge of train indication system, origination, development and installa-

tion. TT 8.5: P 8.5: RC 2.5: D 2.5. Aug. 1926 to date Signal Engr., New York State Transit Comm., New York City, in responsible charge of signalling and interlocking approval work, special studies of rapid transit lines of New York City and Brooklyn, etc. TT 0.4: P 0.4: RC 0.4. TT 17.6: SP 2: P 15.6: RC 7.9: D 7.7. Refers to C. Kendall, W. S. Menden, C. L. Spaulding, H. M. Sperry, F. J. Sprague.

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(3) WING, FREDERICK KELLY, Assoc. M., 1314 Prudential Bldg., Buffalo, N. Y. (Elected Junior May 31, 1892; Assoc. M. Nov. 1, 1899.) (Age 57. Born Tonawanda, N. Y.) 1890 C. E., Cornell Univ. TT 2: SP 2. July to Oct. 1889 and July to Nov. 1890 Asst. Engr., Columbus Constr. Co., of Chicago, on location of natural gas pipe line (130 miles long). TT 0.3: SP 0.3. Nov. 1890 to April 1895 member of firm, Ricker & Wing, Civ. Engrs., in charge of surveys, laying out railroad connections from Buffalo Creek R. R. to industrial plants, inspecting, computing stresses and designing strengthening of highway bridges; designed cemeteries for Utica and Binghamton, N. Y.; designed and supervised abolition of two grade crossings of Erie R. R., Utica. TT 4.5: P 4.5: RC 4.5: D 3. April 1895 to March 1912 in private practice of engineering at Buffalo; designed and supervised construction of sewer systems and sewage-disposal plants in several villages in New York State, of inclined deck reinforced concrete dam at Newfane, N. Y., and of wholesale paper warehouse; had charge of installation of submarine part of intake of water-works, City of Dunkirk; investigated and made plans for additional water supplies for Dunkirk and Gowanda, N. Y. TT 17: P 17: RC 17: D 17. March 1912 to date Pres. and Chf. Engr., Frederick K. Wing Co., Buffalo, designed sewer systems and sewage-disposal plants for Fredonia and LaSalle, N. Y.; designed and supervised construction of sewers and sewage-disposal plants at Tuberculosis Hospital (J. N. Adam Memorial) at Perrysburg for City of Buffalo, for Village of Blasdel and for Wanapah Sewer Dist., sewage-disposal plant for City of Lackawanna, N. Y., and of dock for Evans Elevator, Buffalo; made plans for Outer Harbor Development, Buffalo; made appraisals and testified as to values of railroad properties in towns, villages and cities for New York Central R. R., Erie R. R. and Delaware, Lackawanna & Western R. R.; Engr. (one of three) on examination and report on new filtration plant for City of Buffalo. TT 14.7: P 14.7: RC 14.7: D 14.7. TT 38.5: SP 2.3: P 36.2: RC 36.2: D 34.7. Refers to G. B. Bassett, S. T. M. Carpenter, J. W. Cowper, E. B. Guthrie, T. Horton, W. T. Huber, S. T. Kielland, W. A. Rathmann, J. F. Skinner, S. J. Stone, F. J. Tresise.

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(1) WINSTON, CHARLES A., Assoc. M., 14 Northfield Ave., West Orange, N. J. (Elected April 19, 1920.) (Age 59. Born Greene, N. Y.) 1900 C. E., International Correspondence Schools, Scranton, Pa. Aug. 1886 to Aug. 1887 Rodman, Tidewater Oil Co. TT 1: SP 1. Aug. 1887 to Nov. 1889 Rodman and Leveler, Lehigh Valley R. R. TT 2.3: SP 2.3. Nov. 1889 to Nov. 1895 Asst. to City Engr., Passaic, N. J., on sewer and highway construction and survey of city. TT 6: P 6: RC 6: D 1. Nov. 1895 to Nov. 1896 Asst. Supt. in charge of construction, Enameline Stove Polish Co. Passaic. TT 1: P 1: RC 1. Nov. 1896 to July 1909 Supt. and Chf. Engr., with V. J. Hedden, V. J. Hedden & Sons Co., and Hedden Constr. Co., Newark, N. J., and New York City, on construction of factories, hospitals, office buildings, etc. TT 12.8: P 12.8: RC 12.8: D 2. July 1909 to July 1911 Gen. Contr., New York City, Oyster Bay (N. J.) Theatre, residences, garage, etc., Garden City, N. Y. TT 2: P 2: RC 2. July 1911 to May 1913 Supt. and Chf. Engr., W. H. Fissell & Co., New York City, on construction of office buildings, schools, clubs, etc., Newark, N. J., and Washington, D. C. TT 1.8: P 1.8: RC 1.8. May 1913 to May 1914 Supt. and Engr., J. Henry Miller Co., Baltimore, Md., in charge of construction of 12-story office building, Norfolk, Va. TT 1: P 1: RC 1. May 1914 to Aug. 1916 general engineering, Newark. TT 2.3: P 2.3: RC 2.3: D 0.5. Aug. 1916 to Aug. 1921 Town Engr., West Orange, N. J., on sewers, highways, etc. Jan. 1925 to date Township Engr., Livingston, N. J., water-works, highways, etc.; since Jan. 1917 also member of firm, Freeman & Winston, Civ. and Cons. Engrs. TT 10.5: P 10.5: RC 10.5: D 4. TT 40.7: SP 3.3: P 37.4: RC 37.4: D 7.5. Refers to W. A. Kinsey, A. H. Krone, E. S. Rankin, F. A. Reimer, M. R. Sherrerd, M. N. Shoemaker.

## FROM THE GRADE OF JUNIOR

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(11) BACCA, JOSEPH PAUL, Jun., City Engr., City Hall, Trinidad, Colo. (Elected Dec. 14, 1925.) (Age 27. Born Hastings, Colo.) Licensed Engr., State of Colo. 1922 E. M., Colo. School of Mines. TT 2: SP 2. June to Sept. 1919 with Rapp & Hendrickson, Archts., Trinidad, Colo. June to Sept. 1920 with Wyoming State Highway Dept., Cheyenne, Wyo., and June to Sept. 1921 with Douglass, Corey & Fisk, Inc., Engrs., at Trinidad and Walsenburg.

Colo., on drafting, design, plans, estimates, on building, paving and sewer work, some level and transit work. Sept. 1920 to June 1921 (while student) on oil shale research work under Prof. Arthur J. Franks. June to Sept. 1922 and after Nov. 1922 for one month on office work for Douglass, Corey & Fisk, Inc., and the City Engr. for Trinidad, mostly preparation of plats and calculation of assessment rolls for paving districts. Sept. to Nov. 1922 post-graduate student in Civ. Eng., Colorado School of Mines. *TT 0.5: SP 0.5.* Nov. 1922 to May 1923 (except 1 month) Asst. City Engr., Trinidad, in charge of engineering on Paving Districts 15-18, supervised construction of storm and sanitary sewer systems, etc. *TT 0.5: P 0.5: RC 0.5.* May 1923 to March 1925 with Douglass, Corey & Fisk, Inc., on preliminary estimate and design and Engr. in charge of construction of \$60 000 sanitary sewerage trunk line system for Walsenburg; Paving Engr. for Dist. No. 2, Walsenburg, and Inspector on construction; office and field work for new Alamo Coal Mine in Huerfano County (development work cost about \$500 000); firm handled design of trestles and tipples for coal mines; specifications, contract, etc., for Walsenburg Sanitary Sewer Systems; design and plans for Baca Ditch Flume for Baca Consolidated Ditch Co. of Trinidad; design of Wahatoya pipe-line valve-regulator house for Walsenburg, surveys, inspection, estimates, reports, etc., on sewers, paving, drainage, lighting, etc.; Engr. of Constr., brick pavement, design of 3- and 4-room California type houses, Alamo Coal Co.; design, contract and specifications for Aguilar Light & Power Co. ornamental lighting system, etc.; from Jan. to March 1925 on extension and maps of various mines for coal companies; training at Ft. Bliss, Tex., Officers' Reserve Corps, 348 Engrs., 1st Lieut., Engrs. *TT 1.8: P 1.8: RC 1.8.* March 1925 Asst. County Engr., Las Animas County. April 1925 to date City Engr., Trinidad, Colo., in direct charge of water-works, plumbing, river conservancy, paving, sewerage system, etc.; direct supervision of Street and Bridge Dept. in gravel program (\$20 000), two paving districts, reservoir design, picketwire conservancy plan and design, in conjunction with John E. Field, bridge and culvert design, etc.; also private work, Junior Coll. site, map, roads, etc., in conjunction with S. R. DeBoer, Landscape Archt., Trinidad High School, stadium and athletic field with Mr. DeBoer, and Rapp & Rapp, Archts., Trinidad, track layout, tipple design and surveys, Anchor Fuel Co., Trinidad. *TT 1.9: P 1.9: RC 1.9. TT 6.7: SP 2.5: P 4.2: RC 4.2.* Refers to L. R. Douglass, J. E. Field, J. H. P. Fisk, W. B. Freeman, W. R. Lewis.

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(8) **BARTLETT, CHARLES HENRY**, Jun., 6841 Harper Ave., Chicago, Ill. (Elected June 19, 1922.) (Age 26. Born Chicago, Ill.) 1921 B. S. in C. E., Univ. of Ill. 1923 C. E., Yale Univ. *TT 2: SP 2.* June to Sept. 1917 Bldg. Inspector, Fred S. James & Co., Insurance Underwriters. Summers 1918 and 1920-1922 with Illinois Central R. R. Co. as Chainman, Rodman and Instrumentman, and on drafting, design, transit and level work, etc. June to Sept. 1919 Chainman, Elevated R. Rs. of Chicago. *TT 0.6: SP 0.6.* June 1923 to June 1925 Instrumentman, I. C. R. R. Co., in full charge of surveys and construction on 4 miles of track for Dering mine at Eldorado, Ill., and 3 miles for Crerar-Clinch Coal Co., at DuQuoin, Ill.; new receiving yard, caboose tracks, coaling station, etc., at East St. Louis, Ill., and other construction curing track-slides near Lambert, Mass., invented, applied and taught special system of string lining curves. *TT 2: SP 0.5: P 1.5: RC 1.5: D 0.5.* June 1925 to date Asst. Engr. and Prin. Asst. Engr., with James Walker, Cons. Engr., Chicago, in charge of field work, including surveys, railroad location, inventory and appraisal of transmission and distribution lines (electric), gravel pits, stone quarries, ice plants, small generating stations, etc.; in charge of field engineers. *TT 1.5: P 1.5: RC 1.5: D 0.3. TT 6.1: SP 3.1: P 3: RC 3: D 0.8.* Refers to H. E. Bartlett, W. J. Boucher, M. L. Enger, J. M. Farrin, W. P. Hopplin, M. Johnson, W. A. Shaw, J. C. Tracy.

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(7) **CARTWRIGHT, CHARLES BARNES**, Jun., 3731 Whitney Ave., Detroit, Mich. (Elected June 1, 1920.) (Age 31. Born Algonac, Mich.) 1917 B. E., Univ. of Mich. *TT 2: SP 2.* July to Nov. 1917 Asst., Eng. Corps, Cleveland, Cincinnati, Chicago & St. Louis Ry. Co., at Springfield, Ohio. *TT 0.3: SP 0.1: P 0.2.* Nov. 1917 to June 1919 with U. S. Army, until Feb. 1918 as Private, Field Artillery, then Corporal, 310th Engrs., May to Sept. 1918 Sergeant, Sept. 1918 to Feb. 1919 Sergeant, 1st Class, and after Feb. 1919 2d Lieut., 605th Engrs., in France. *TT 1.7: SP 1.2: P 0.5.* July 1919 to April 1920 Asst. Engr., Cleveland, Cincinnati, Chicago & St. Louis Ry., at Gallon, Ohio. *TT 0.8: P 0.8.* April 1920 to date with Wayne County Road Comm., Detroit, Mich., until Jan. 1921 as Res. Engr., and since then Job Supt. handling paving and grading work. *TT 6.7: P 6.7: RC 6. TT 11.6: SP 3.3: P 8.3: RC 6.* Refers to P. A. Fellows, H. W. King, R. L. McNamee, A. M. Rawn, H. E. Riggs, L. C. Smith, M. F. Wagnitz.

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(15) CAULFIELD, HENRY JOHN, Jun., P. O. Box 711, Seguin, Tex. (Elected March 12, 1923.) (Age 29. Born Waco, Tex.) Sept. 1918 to Jan. 1919 and Oct. 1919 to June 1920 student, Eng. Dept., Univ. of Texas. *TT 0.3: SP 0.3.* Jan. to Aug. 1919 Draftsman, Rodman, Instrumentman and Inspector, under City Engr. of Waco. *TT 0.7: SP 0.7.* Aug. to Oct. 1919 Draftsman, Rodman and Instrumentman under County Engr. of McLennan County, Tex. *TT 0.2: SP 0.2.* June 1920 to Nov. 1921 with McCall-Moore Eng. Co., Waco, until Nov. 1920 as Timekeeper and Officeman on bridge construction at Ballinger, Tex., then Officeman and Asst. to Supt. on highway bridge and culvert work at San Angelo, and (after July 1921) Del Rio, Tex. *TT 1.5: SP 1.5.* Nov. 1921 to Jan. 1922 Instrumentman with Jackson & Lacy, Engrs., at Mexia, Tex., oil field work. *TT 0.2: SP 0.2.* Jan. to Sept. 1922 Draftsman, Instrumentman and Second Asst. Engr. under County Engr., at Waco, on road work. *TT 0.7: SP 0.7.* Sept. 1922 to Aug. 1924 Asst. to G. E. Byars at Waco, on design and supervision of construction of two city additions (approx. \$120 000). *TT 2: P 2: RC 2: D 2.* Aug. to Nov. 1924 private practice in Waco. *TT 0.2: P 0.2: RC 0.2: D 0.2.* Nov. 1924 to date with State Highway Dept., until May 1925 as Officeman and Asst. to Res. Engr. in Chg., at Itasca, 16 miles concrete road (\$600 000); then Res. Engr. in Chg., until June 1925 at Itasca, and since then at Seguin, on 16 miles road asphalt road, and surveys, locations and plans for other roads. *TT 2: P 2: RC 1.5: D 1.5 TT 7.6: SP 3.5: P 4.2: RC 3.7: D 3.7.* Refers to P. H. Everett, M. Hannah, R. J. Potts, U. Stephens, R. J. Windrow.

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(1) COHEN, SAMUEL HENRY, Jun., 128 President St., Passaic, N. J. (Elected Oct. 2, 1922.) (Age 26. Born New York City.) Licensed Prof. Engr., State of New Jersey. 1922 S. B. Mass. Inst. Tech. *TT 2: SP 2.* June to Dec. 1918 Rodman, Erie R. R. Co. *TT 0.5: SP 0.5.* June to Aug. 1920 Transitman for R. S. Wise, Passaic, N. J., municipal engineering. June to Nov. 1922 Structural Steel Draftsman, Harris Structural Steel Co., New York City, detailing steel for buildings. *TT 2.5: SP 2.5.* Dec. 1922 to June 1923 Structural Steel Draftsman, Tunnel Div., Board of Estimate, New York City, on proposed Brooklyn-Staten Island Rapid Transit tunnel. *TT 0.6: SP 0.6.* July 1923 to Aug. 1924 in Designing Office, New York and New Jersey Bridge and Tunnel Comms., until Feb. 1924 as Jun. Engr., then Asst. Engr. on work in connection with subway sections of Holland Tunnels. *TT 1.2: SP 0.7: P 0.5: D 0.5.* Sept. 1924 to date with New Jersey State Highway Comm., Route No. 1, Extension Office, Jersey City, N. J., until May 1926 as Bridge Designer, and since June 1926 Chf. Bridge Designer on studies, designs and estimates of various routes and structures for New Jersey connection to Holland Tunnels. *TT 2.4: P 2.4: RC 1.4: D 2.4 TT 9.2: SP 6.3: P 2.9: RC 1.4: D 2.9.* Refers to R. M. Beck, O. L. Brodie, R. S. DuBois, H. R. Gabriel, S. Johannesson, F. Lavis, L. R. Shellenberger.

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(13) DeCEW, LLEWELLYN, Jun., Box 126, Sacramento, Cal. (Elected July 6, 1920.) (Age 31. Born Honolulu, Hawaii.) 1917 B. C. E., Univ. of Manitoba. *TT 2: SP 2.* May to Aug. 1914 Chainman, Manitoba Highway Comm., Winnipeg, Canada. June to Aug. 1917 Chainman, California Highway Comm. *TT 0.2: SP 0.2.* Sept. 1917 to Feb. 1919 2d Lieut., Co. A, 513th Engrs., U. S. Army, after May 1918 overseas on railroad construction, etc. *TT 1.4: P 1.4: RC 1.4.* May to Aug. 1919 Rodman, California Highway Comm. *TT 0.2: SP 0.2.* Aug. to Nov. 1919 Asst. on dam and plant construction, Transitman; etc., Elec. Service Co. *TT 0.2: SP 0.2.* April 1922 to date with California Highway Comm., until Aug. 1923 Rodman and Asst. to Res. Engr. on highway construction; Aug. 1923 to April 1924 Draftsman in office and on location, and since April 1924 Draftsman and Asst. Res. Engr. and (since April 1925) Res. Engr. on bridge construction and repairs. *TT 4.6: SP 3: P 1.6: RC 1.6 TT 8.6: SP 5.6: P 3: RC 3.* Refers to V. A. Endersby, C. L. McKesson, R. M. Morton, C. S. Pope, T. E. Stanton, Jr., J. C. Wilson.

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(1) DICK, ALBERT, Jun., 1911 University Ave., New York City. (Elected Jan. 17, 1921.) (Age 30. Born New York City.) 1920 B. S. in C. E., Cooper Union (Night). May to Sept. 1916 Detailer and Tracer on steel mill buildings, Hooper Falkenau Eng. Co., New York City. *TT 0.3: SP 0.3.* May to Sept. 1917 Machine and Power Plant Draftsman, U. S. Navy Yard, Philadelphia, Pa. *TT 0.3: SP 0.3.* May 1918 to Nov. 1919 Field Engr. and Draftsman, E. L. Phillips & Co., New York City, on design and layout of public utility plants, etc. *TT 1.5: P 1.5: D 1.* Nov. 1919 to March 1920 Machine Designer, D. W. Driscoll & Co., Astoria, N. Y., computations on design for variable speed transmission. *TT 0.3: P 0.3: D 0.3.* March 1920 to Nov. 1921 Power Plant Draftsman and field work, Butterworth Judson Chemical Corporation, Newark Transfer, N. J., on layout of chemical plants, piping and field work. *TT 1.7: P 1.7: RC 0.7: D 1.* Nov. 1921 to Dec. 1922 Designing Draftsman and Field Engr., Mexican Petroleum Co., New York City, on building design, in charge of construction

and dredging. *TT 1.1: P 1.1: RC 0.5: D 0.5.* Dec. 1922 to Dec. 1924 Designing Draftsman with Geo. F. Hardy, New York City, design of mill buildings, layout of paper mills, piping and checking. *TT 2: P 2: D 2.* Dec. 1924 to March 1926 Chf. Draftsman with G. E. Rohmer, Cons. Engr., New York City, in charge of design of industrial buildings and concrete; checking and equipment layouts. *TT 1.2: P 1.2: RC 1.2.* March 1926 to date Layout and Piping Draftsman, with Thos. E. Murray, New York City, layout of oil room and piping of oiling systems. *TT 0.8: P 0.8: D 0.8.* *TT 9.2: SP 0.7: P 8.6: RC 2.5: D 5.6.* Refers to A. F. Hartman, A. A. Hormel, G. Morrison, G. L. Robinson, P. A. Trost, 248

(1) **KRUYIS, FREDERIK**, Jun., 110 Van Bevernack St., The Hague, Holland. (Elected March 16, 1925.) (Age 31. Born Leningrad, Russia.) 1921 C. E., Technische Hoogeschool, Delft, Holland. *TT 2: SP 2.* Feb. to Nov. 1922 Municipal Engr., City of Amsterdam, Holland, designing concrete construction. *TT 0.8: P 0.8: D 0.8.* Nov. 1922 to Feb. 1924 Engr., Gen. Concrete Co., The Hague, Holland, designing, estimating, supervising concrete structures. *TT 1.2: P 1.2: RC 0.7: D 0.5.* Aug. to Dec. 1924 Engr., Murrell & Co., New York City, on appraisal of buildings. *TT 0.3: P 0.3: D 0.3.* Jan. 1925 to June 1926 Designer, until July 1925 with Henry L. Doherty & Co., New York City, then with New Jersey State Highway Comm., and after March 1926 American Managing & Eng. Co., detailing, designing and checking structural steel and reinforced concrete structures, including concrete and steel bridge, viaduct, highway structures, power and gas plants. *TT 1.5: P 1.5: D 1.5.* June to Aug. 1926 Bridge Designer, The Port of New York Authority, calculating and designing large bridge structures. *TT 0.2: P 0.2: D 0.2.* *TT 6.1: SP 2: P 4.1: RC 0.7: D 3.3.* Refers to W. A. Cuenot, S. Johannesson, C. E. Payne, T. K. Thomson, J. B. Sneathlage.

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(12) **KYLSTRA, JOHN**, Jun., 747 Sixteenth Ave. North, Seattle, Wash. (Elected July 9, 1923.) (Age 31. Born Engelum, The Netherlands.) 1922 B. S., in Civ. Eng., Univ. of Wash. *TT 2: SP 2.* Aug. 1922 to Sept. 1923 (until Dec. 1922 afternoons only) Production Mgr., Lovsted & Co., Seattle, Wash., drafting and design of gears, bearings, etc., for logging locomotives and sugar plantation equipment. *TT 0.6: P 0.6: RC 0.4.* Sept. 1923 to Oct. 1924 Fieldman, Pacific Telephone & Telegraph Co., Seattle, Wash., acting as Instrumentman, in charge of small maintenance projects, preparing larger estimates. *TT 1.1: SP 0.6: P 0.5: RC 0.3.* Oct. 1924 to date Stress Engr., Boling Airplane Co., Seattle, stress analysis of airplanes, metal and wood construction, including pursuit, bomber, patrol, training, mail and transport planes. *TT 2.3: SP 0.5: P 1.8: RC 1.7.* *TT 6: SP 3.1: P 2.9: RC 2.4.* Refers to W. F. Allison, I. L. Collier, J. B. Hamilton, C. C. More, J. C. Rathbun.

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(1) **McGAREY, THOMAS FRANCIS, Jr.**, Jun., Box 647, Mineola, N. Y. (Elected Aug. 31, 1925.) (Age 31. Born Charleston, S. C.) 1914 B. S., Mil. Coll. of S. C. *TT 2: SP 2.* Sept. 1914 to Nov. 1915 Jun. Engr., Rapid Transit Subway Constr. Co., in charge of concrete arches, walls, etc., on Route 5, Sec. 7, Lexington Ave. Subway, 43d to 53d St., New York City. *TT 1.2: SP 1.2.* Nov. 1915 to Feb. 1917 Asst. Res. Engr. with Rodgers & Hagerty, in active charge of laying out and detail engineering work for Eastern Parkway Subway, New York Ave. to Buffalo Ave. *TT 1.2: SP 1: P 0.2: RC 0.2.* Feb. to May 1917 Asst. in office of Supt. of roller mills, Bethlehem (Pa.) Steel Co. *TT 0.3: SP 0.3.* June 1917 to June 1919 with 11th U. S. Engrs., A. E. F., as Private, etc., to Capt., on railroad construction and maintenance, building trenches, dugouts, etc. *TT 2: P 2: RC 1.5.* July to Nov. 1919 Engr. with Rodgers & Hagerty, on foundation work in Manhattan and Brooklyn. *TT 0.4: SP 0.4.* Nov. 1919 to Dec. 1920 with E. A. Stevenson & Co. (not professional work). Jan. 1921 to July 1922 Engr., U. S. Trucking Corporation, in charge of Excavating Dept., on cellar digging. *TT 1.5: P 1.5: RC 1.5.* July 1922 to Oct. 1926 with Marc Eldlitz & Son, until March 1925 as Chf. Clerk in charge of all cost data, etc., on addition to R. H. Macy & Co's store, then Chf. Engr. in full charge of all engineering work for new Columbia Presbyterian Medical Center, New York City. *TT 4.3: SP 2.8: P 1.5: RC 1.5.* Oct. 1926 to date Gen. Supt., Staten Island Cons. Co., in charge of erection of high schools at Sayville and Mineola, N. Y. *TT 0.2: P 0.2: RC 0.2.* *TT 13.1: SP 7.7: P 5.4: RC 4.9.* Refers to V. T. Boughton, W. T. Chevallier, C. D. Drew, F. V. Hogan, C. N. Kent, W. B. Parsons.

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(10) **McGUIRE, DONALD DAVID**, Jun., 418 Sixth Ave. North, Nashville, Tenn. (Elected Aug. 4, 1924.) (Age 28. Born Aurora, Ill.) Sept. 1917 to June 1918 and Jan. 1919 to May 1920 student, Univ. of Illinois. *TT 0.6: SP 0.6.* June to Sept. 1918 at Officers' Training Camp, Ft. Sheridan, Ill., and Sept. to Dec. 1918 2d Lieut., Infantry, U. S. Army, Purdue Univ. Training Corps, Co. Commander, Co. D. *TT 0.5: SP 0.5.* June 1920 Rodman, Deutschler Eng. Co., Aurora, Ill. *TT 0.1: SP 0.1.* June 1920 to Feb. 1921 Instrumentman

Chicago, Burlington & Quincy R. R. *TT 0.6: SP 0.6.* Feb. to April 1921 Computer, Valuation Dept., Missouri Pacific R. R. *TT 0.2: SP 0.2.* April 1921 to Feb. 1926 with Illinois Highway Dept., until May 1922 as Jun. Testing Engr., investigational work, Bates Experimental Road; then Asst. Div. Engr. of Materials, Chicago Div., and after March 1923 Asst. Engr. of Materials, in charge of investigations of design of concrete roads, and of Investigational Dept., Bureau of Materials. *TT 4.7: SP 1.1: P 3.6: RC 3.6.* Feb. 1926 to date Asst. Engr. of Tests, Tennessee Highway Dept., being Prin. Asst. in responsible charge of testing of construction materials and supervising research. *TT 1: P 1: RC 1.* *TT 7.8: SP 3.2: P 4.6: RC 4.6.* Refers to E. D. Akers, R. H. Baker, C. N. Bass, H. F. Clemmer, A. T. Goldbeck, C. Older, C. H. Olmstead.

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(6) **MESSNER, EDWARD GRANT**, Jun., 263 Fisk St., Pittsburgh, Pa. (Elected April 7, 1924.) (Age 29. Born Pittsburgh, Pa.) Sept. 1913 to Nov. 1916 student, Carnegie Inst. Tech. *TT 0.6: SP 0.6.* Nov. 1916 to June 1918 Rodman, Pittsburgh Rys. Co. *TT 1.6: SP 1.6.* June to Nov. 1918 Transittman, U. S. Housing Corporation, on townsite location. *TT 0.5: SP 0.5.* Nov. 1918 to Jan. 1922 Levelman and Inspector, Baltimore & Ohio R. R., Pittsburgh, Pa., on bridge construction. *TT 3.1: SP 3.1.* Jan. 1922 to March 1923 Field Engr., Andrews Eng. Co., on construction of mill and mine buildings and small bridges. *TT 1.2: P 1.2: RC 1.2.* April 1923 to Jan. 1925 Asst. Constr. Engr. with C. S. Davis, Cons. Engr., on bridge construction (\$3 000 000). *TT 1.7: P 1.7: RC 1.7.* Jan. 1925 to date Res. Engr., Allegheny County, Div. of Constr., Bureau of Bridges, Pittsburgh. *TT 2: SP 1: P 1: RC 1.* *TT 10.7: SP 6.8: P 3.9: RC 3.9.* Refers to N. F. Brown, W. H. Buente, V. R. Covell, C. S. Davis, A. A. Henderson, P. S. Monk.

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(1) **MONROE, ROBERT LOUIS**, Jun., 29 Van Wagenen Ave., Jersey City, N. J. (Elected Aug. 28, 1922.) (Age 29. Born Monroe, N. Y.) 1922 C. E., Cornell Univ. *TT 2: SP 2.* April 1922 to Feb. 1923 Structural Steel Detailer, until Dec. 1922 with American Bridge Co., Trenton, N. J., then with Post & McCord, Inc., New York City. *TT 0.8: SP 0.8.* Feb. to April 1923 Designer-Draftsman, Southern Power Co., Charlotte, N. C., structural design and field checking on extension to steam-electric station. *TT 0.2: P 0.2: D 0.2.* April 1923 to May 1926 Hydr. Designer, Elec. Bond & Share Co., New York City, detail designs of powerhouse substructures, dams, intakes, pipe lines, retaining walls and foundations, Squad Leader and Checker, hydro-electric plant layouts, estimates and stream flow data, power investigations, 5 months on field investigation in South America, measurement of incomplete structures, etc. *TT 3.1: P 3.1: RC 1.2: D 2.7.* May 1926 to date Designer with H. S. Ferguson, New York City, detail designs of power house (hydro-electric) substructure, dams and intakes, reinforced concrete, checking plans for boiler house (two 825 B. H. P. boilers), piping and manufacturer's details of equipment, quantities of refractory and making detail drawings of boiler settings, structural steel estimates. *TT 0.7: P 0.7: D 0.7.* *TT 6.8: SP 2.8: P 4: RC 1.2: D 3.6.* Refers to H. S. Ferguson, J. H. McCarthy, W. S. Merrill, H. Miller, C. N. Phillips, H. H. Steinhäuser.

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(12) **PATTERSON, WILLIAM DARYL**, Jun., 202 Burke Bldg., Seattle, Wash. (Elected Sept. 12, 1921.) (Age 31. Born Neosho, Wis.) Sept. 1912 to Jan. 1915 student, Coll. of Eng. Univ. of Wisconsin. *TT 0.7: SP 0.7.* Sept. 1915 to March 1917 Machinist and Mechanic, Steinle and Gisholt Turret Machine Companies, Madison, Wis. (not civil engineering). April 1917 to date Aid (2 years), Jun. Hydrographic and Geodetic Engr. (3 years) and Hydrographic and Geodetic Engr. (5 years), U. S. Coast and Geodetic Survey, until Feb. 1922 acting as Observer on wire-drag, hydrographic and geodetic surveys, etc.; March 1922 to Nov. 1924 Executive Officer and Prin. Asst. Engr., U. S. S. *Bache* and *Hydrographer* on surveys of Gulf Coast; Dec. 1924 to Dec. 1925 in charge of *Coast Pilot* revision, Atlantic and Gulf Coasts; Jan. to Sept. 1926 with U. S. S. *Surveyor* in charge of sub-party, surveys in Alaska; since Oct. 1926 Executive Officer and Prin. Asst. Engr., U. S. S. *Surveyor*, office computations of Alaska surveys. *TT 9.7: P 9.7: RC 4.2.* *TT 10.4: SP 0.7: P 9.7: RC 4.2.* Refers to L. O. Colbert, J. H. Hawley, E. H. Pagenhart, W. E. Parker, R. S. Patton, H. A. Seran.

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(1) **PIRKNER, HERBERT RUDOLF**, Jun., 7321 Fourth Ave., Brooklyn, N. Y. (Elected May 28, 1923.) (Age 29. Born New York City.) 1920 B. S. in Civ. Eng., Cooper Union Inst. Sept. 1918 to Dec. 1924 on industrial buildings of steel, concrete and reinforced concrete construction, until Jan. 1921 as Draftsman and Checker, Turner Constr. Co., Jan. to Oct. 1921 Draftsman, and March 1922 to March 1923 Estimator, White Constr. Co., April 1923 to March 1924 Structural Designer, Walter Kidde Co., Inc. and March to Dec. 1924 Structural designer, Dwight P. Robinson Co., all of New York City, and Oct. 1921 to March 1922 Draftsman, with W. T. Anderson, Forest Hills, N. Y. *TT 6.1: SP 1: P 5.1: RC 0.5: D 1.6.*

Dec. 1924 to date Asst. Engr. on ventilation buildings for Holland Tunnels, New York and New Jersey Interstate Bridge and Tunnel Comms., (designing and in responsible charge of drawings as Asst.). TT 2: P 2: RC 1: D 2. TT 8.1: SP 1: P 7.1: RC 1.5: D 3.6. Refers to U. W. T. Berg, F. Leiser, H. C. Paddock, D. Robertson, O. S. Schlich, J. R. Smith, E. Welle.

(15) THOMAS, RODERIC BRUCE, Jun., 1107 Mercantile Bank Bldg., Dallas, Tex. (Elected Dec. 15, 1924.) (Age 25. Born Dallas, Tex.) 1922 B. S., Agri. and Mech. Coll. of Tex. TT 2: SP 2. June to Sept. 1920 Rodman, City of Dallas and Dallas County Levee Improvement Dist. No. 10. June 1922 to date with Myers & Noyes, until June 1924 as Rodman, Inspector, Instrumentman and Field Engr., on sewers, water, paving, etc., and since then Field Engr. and Office Engr. on surveys and design of similar work; hydraulic design on \$6 000 000 levee project. TT 4.5: SP 0.5: P 4: RC 2.5: D 1.5. TT 6.5: SP 2.5: P 4: RC 2.5: D 1.5. Refers to V. R. Brady, S. W. Freese, T. C. Forrest, Jr., O. H. Koch, E. L. Myers, E. N. Noyes.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.